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ABSTRACT

This investigation sought to study the socioeconomically disadvantaged child and his levels of achievement as related to the control of positive and negative reinforcements, personality constructs, classroom behavior, and parental attitudes about classroom behavior and school achievement. The sample consisted of 50 matched pairs of eighth grade black boys and girls. Findings tended to support previous research--which suggested that a belief in self-responsibility is a motivational influence on achievement. Additional support was also found for the construct-validity of the internal-external control variable as a generalized personality construct. Significant sex differences were found as well. Few significant differences were found among the mothers of underachievers and adequate achievers in their responses to the personal interview. [Due to the quality of print in the original copy, this document will be only marginally legible in hard copy and microfiche reproduction.] (Author/DM)

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FINAL REPORT

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FACTORS AFFECTING THE SOCIO-ECONOMICALLY DISADVANTAGED CHILD IN AN EDUCATIONAL SETTING

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SUMMARY

The present investigation was designed to study the socio-economically disadvantaged child and his levels of school achievement, as related to the internal versus external control of positive and negative reinforcements personality constructs, classroom behavior and parental attitudes concerning classroom behavior and school achievement. Previous research indicates that among children who come from lower-economic, socially impoverished circumstances, there is a high proportion of school failure, reading and learning disabilities, and life adjustment problems. Nevertheless, there are many children who are so classified who score within the normal range or above on such tests, do well in school, and appear to be highly motivated toward achieving well-defined goals. The present research represents an attempt to study further some of the variables that should assist in the understanding of the "adequate achiever" in this culturally disadvantaged group.

The sample of this study consisted of 50 matched pairs of eighth grade Black boys and girls, selected from schools defined as poverty schools under Title I, Elementary and Secondary Education Act of 1965. All subjects had intelligence quotients between 90 - 109, as measured by the Lorge-Thorndike Intelligence Test. One member of each pair was catagorized in either Group A or Group B, based upon his score on the Iowa Basic Skills Achievement Test. Group A (Adequate Achievers) contained students whose projected composite achievement scores were 9.2 or better; while Group B (Underachievers) contained students whose projected composite achievement scores were 7.1 or below.

Two measures of the internal versus external control of reinforcements personality dimension, the Intellectual Achievement Responsibility (IAR) Questionnaire, and the Children's Picture Test of Internal-External Control, (Battle I-E), were administered to each student. An index of classroom behavior, attitudes and performance was established by converting the combined totals from each of two teachers' ratings into a single composite score. Information regarding mothers' attitudes and reactions were obtained from responses to the Intellectual Achievement section of the Research Institute Questionnaire and Rating Scales; and by personal interviews of mothers in the homes of subjects.

Analysis of data revealed the finding that Group A subjects (Adequate Achievers) tended to be more internal for both intellectual achievements, (as measured by the IAR), and in more general situations, (as measured by the Battle I-E), than were Group B subjects (Underachievers). When boys and girls were considered separately, Group A girls were found to be significantly more internal in both intellectual achievement and in more general situations than Group B girls. Group A boys were revealed to be more internal than Group B boys in intellectual situations, but no significant difference was found between Group A boys and Group B boys in more general situations. Analysis of sex differences revealed no significant difference between Group A boys and Group A girls on this variable; while Group B boys were found to be significantly more internal than were Group B girls.

When positive reinforcement (I+) and negative reinforcement (I-) were considered Group A girls were found to be significantly more internal in both variables than were Group B girls; while a comparable significant difference was found between Group A and Group B boys only for internal control of positive reinforcement. No significant difference was found between Group A and Group B boys for negative reinforcement.

As expected, Group A subjects were rated significantly higher by teachers in classroom behaviors and attitudes and personality characteristics than were Group B subjects. When sex differences were analysed, girls in both Group A and Group B were consistently evaluated by teachers as displaying less deviant behavior than were boys in Group A and Group B.

The mothers of Group A subjects were found to give significantly more total responses than did the mothers of Group B subjects; and the mothers of girls were found to be significantly more responsive than were mothers of boys. Analysis of data also indicated that mothers of Group B subjects gave significantly more negative responses as first responses than did mothers of Group A subjects.

Responses to questionnaires revealed that mothers of Group A subjects tended to rate their children as more competent, and also tended to state that they were more satisfied with their children's academic achievement, than did mothers of Group B subjects. No significant differences were revealed between mothers in either group in the minimal standards that they set for there children nor in the importance they attributed to their children reaching high intellectual and academic goals.

Mothers in both groups tended to set high minimal standards and to hold high attainment value for their children in the intellectual area.

Data concerning responses to personal interview questions indicated few significant differences between the mothers of Group A and Group B subjects. The mother's of boys in Group A manifested significantly more satisfaction concerning their children's academic-intellectual achievement than did the mother's of the boys in Group B, but no comparable significant differerces were found for the mothers of Group A and Group B girls.

Analysis concerning sex differences indicated that the mother's of girls tended to have higher levels of expectations, higher degree of satisfaction with their daughter's accomplishments, and higher minimal standards in the academic area, than did the mothers of the boys.

Results from this investigation support previous research which suggest that a belief in self-responsibility constitutes a motivational influence upon achievement performances. Thus the child who feels that he, rather than someone else, is responsible for his successes and failures appears to show greater initiative in seeking higher grades, intellectual rewards, and teacher approval. Underachievers may develop more extreme external attitudes than adequate achievers as a defensive reaction to perceived reduced opportunities and choices for intellectual and academic rewards.

The data suggest that a girl's belief that she is responsible for both successes and failures which eventuated from her intellectual achievement efforts may constitute a greater incentive to academic achievement than a similar orientation in the case of boys. Black boys in this particular socio-economically disadvantaged group appear to be more externally oriented concerning successes and failures in intellectual-academic situations. All boys in this sample may tend to see their world with some degree of anomie; and themselves as having little control over their destinies under such conditions. Thus, for Black boys, externalization might be both an adaptation and a reaction to a real situation in which they perceive the improbability of successfully attaining achievement standards set by a powerful, external entity.

In more general situations, again, the culture appears to be basically the same for both adequate achieving and underachieving boys. But under these conditions, underachieving boys are more internal than underachieving girls. The general cultural pressure for boys to take more responsibility for the consequences of their own actions than girls in "real life" circumstances, might be indicated by the above finding.

The fact that mothers of low achievers appear to respond in a more negative manner to their children in situations related to intellectual achievement and academic activities, suggests that parents whose relationships with their children are punitive, rejecting and critical are more likely to foster their children's belief in external control than are the parents who maintain a more supportive, positive relationship with their children. Thus, threatening interactions between mothers and their children may help promote feelings of inadequacy and insecurity, and thus discourage them from assuming credit for their successes and failures.

Few significant differences were revealed between the mothers of underachievers and the mothers of adequate achievers in the responses given in the personal interview situations. While the mothers of girls tended to hold higher minimal standards and expectancy values, and to be more satisfied with evidence of achievement than were the mothers of boys; and the mothers of adequate achievers appeared to be more satisfied with academic achievement levels than were the mothers of underachievers; few other differences were obtained. In all other areas the mothers of all of the subjects in this socio-academic group appeared to be more satisfied with academic achievement levels than were the mothers of underachievers; few other differences were obtained. In all other areas the mothers of all of the subjects in this particular socio-economically disadvantaged group appeared to give relatively the same types of answers to questions posed to them in the interview setting. Either these parents are in fact not different in their attitudes toward their children's academic-intellectual accomplishments; might be less willing to give honest answers concerning these differences in an interview situation; and/or interview responses might not be significantly related to internality-externality.

The overall findings in this investigation lends additional support to the construct validity of the internal-external control variable as a generalized personality construct.

Chapter 1 - Introduction and Background Information for Study

A. Problems and Objectives

The extension and democratization of opportunity for individual achievement, regardless of adventitious circumstances of race, color, and creed, continue to remain major factors in the rationale for publically supported schools. the democratic ideal demands that the educational system strive to provide an education for 100% of the school-age children. This invariably means that efforts will be made to educate the emotionally unstable, the physically handicapped, the unmotivated, hostile and unwilling, and those less able to cope with the school culture and its expectations. Thus, the necessity of specially adapted curriculum, methods and guidance to accomodate the special problems of the social deviant is increasingly recognized as a major educational and social task.

It is generally recognized that we have not reached these educational goals. An ever increasing body of research over the past few decades has made it clear that the utilization of educational opportunities tend to follow, to a large degree, the lines of stratification of the social system of our society. There seems to be a direct correlation between socio-economic position and academic achievement; with poor academic achievement persisting as a social problem in the lower socio-economic group. Among children who come from lower economic, socially impoverished circumstances, there is a high proportion of school failure, school drop-outs, reading and learning disabilities, as well as life adjustment problems. Thus, these children not only grow up poorly equipped academically, but also the effectiveness of the school as a major socialization institution is diminished. The fact that this same segment of the population contributes disproportionately to the delinquency and other social deviancy statistics adds to the urgency of developing preventive educational procedures.

There are many children who, although they come from lower-class, economically and socially disadvantaged circumstances, do well in school, become interested in pursuing higher education, and appear to be highly motivated towards reaching well-defined goals. Why? Who are these students? In what ways are their home and school experience different from the home and school experiences of those children who do not do so well in school? Is there a difference in the self-esteem of these children; the aspirations of their parents for them, level of morale; structure of the family, or ego development?

One of the most compelling arguments for providing the maximum educational advantages for all American children, regardless of their social, economic, national or racial background, is the fact that some students, even from the most disadvantaged homes, have successful school experiences. If we could determine what factors contribute to the observed fact that some children who are classified as socially and economically disadvantaged effectively use their intellectual potentials for academic advancement, while others so classified are not successful in this aspect of life, education would be in a better position to use such knowledge to provide more effective training and specifically directed motivational education efforts.

The present study was an attempt to isolate and study the interrelationships between certain variables which may differentiate between, and provide a better understanding of, the "adequate achiever" and the "underachiever" in this low income, Black population.

B. Who Are the Socio-Economically Disadvantaged?

The socio-economically disadvantaged youth is not exclusively a member of any particular racial, regional, occupational, or behavioral group. Although they have congregated most noticeably in the big cities, the disadvantaged are actually widely distributed in the U. S., being present in all except the very high income communities. In racial and ethnic terms, the disadvantaged groups are about evenly divided between whites and non-whites; making up 15% of the adult population, and approximately 20% of the child population. According to Havighurst (1965) the socio-economically disadvantaged group consists of the following ethnic and social groups:

1. Negroes from the rural South who have migrated recently to the Northern industrial cities.
2. Whites from the rural South and the Southern mountains who have migrated recently to the Northern industrial cities.
3. Puerto Ricans who have migrated to a few Northern industrial cities.
4. Mexicans with a rural background who have migrated into the West and Midwest.
5. European immigrants with a rural background, from Eastern and Southern Europe.

These five groups are at the bottom of the American society in terms of income; and they suffer from social and economic discrimination at the hands of the majority of the society.

In terms of certain family characteristics which relate directly to the child, the socially disadvantaged child is more likely to come from a family lacking in concern about reading, education, stimulating conversation, and good school achievement (Bernstein, 1961).

In terms of personal characteristics, Riessman (1962) believes that the disadvantaged students tend to be:

1. physical and visual rather than aural;
2. content-centered rather than form-centered;
3. externally oriented rather that introspective;
4. problem centered rather than abstract centered;
5. spatial rather than temporal;
6. inductive rather than deductive;
7. slow, careful, patient rather than quick, facile, and clever;
8. oriented to action and games rather than tests;
9. expressive rather than instrumental;
10. one-track thinkers rather than flexible;
11. action oriented in verbal matters rather than word-bound.

The term "educationally deprived children" has been defined under Title I, Elementary and Secondary Education Act of 1965, as:

> ...those children who have need for special educational assistance in order that their level of educational attainment may be raised to that appropriate for children of their age. The term includes children who are handicapped, whose needs for such special educational assistance result from poverty, neglect, delinquency, or cultural or linguistic isolation from the community at large.

This same U. S. government regulation requires that projects be designed to meet the needs of educationally deprived children living in school attendance areas with high concentration of children from low-income families or those areas where the concentration of such children is as high as, or higher than, the average concentration for the district as a whole.[1]

Some local educational agencies often use the Office of Economic Opportunity poverty guideline (1964) of $2000 as the family income for two persons, and $500 for each additional member when applying for grants. However, income data were not easily available, and/or where out-of-date for this Midwestern Public School District. Therefore, for schools to be designated as "poverty schools," the number of children from low-income families were estimated on the basis of the number of such children who are in families receiving Aid to Families with Dependent Children, (AFDC).

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[1] Revised Criteria for the Approval of Title I, E.S.E.A., Title I Program Guide #44.

For the purposes of this study, children selected will be registered in schools identified by the Board of Education of St. Louis for participation in TitleI activities on the basis of educational deficiency and need for special services as cited in the above mentioned regulations.

C. Brief Review of Related Literature

The internal versus external control of reinforcement construct distributes individuals according to the degree to which they accept personal responsibility for what happens to them, in contrast to the attribution of responsibility to forces outside of thier control. This construct, as conceptualized in Rotter's social learning theory (Rotter, 1954), is a generalized expectancy operating across a large number of situations which relates to whether or not the individual possesses or lacks power over what happens to him. People who usually see the reinforcements they receive as caused by their own instrumental behaviors have been termed"internals". "Externals" are those people who believe that their reinforcements are caused by agents or forces outside themselves over which they have no control. The internal control dimension distributes individuals according to the degree to which they accept personal responsibility for what happens to them. The external control dimension distributes individuals according to the degree to which they attribute causality to any number of forces such as chance, fate, supernatural powers, an inability to understand the world, the influence of other people, task characteristics, or complex social and political processes.

Many experiments and studies have been performed, lending empirical evidence to support this interpretation of the generalized expectancy for internal versus external control of reinforcement.

Phares (1957. 1962), James and Rotter (1958), James (1957), Rotter, Liverant, and Crowne (1961), Holden and Rotter (1962), Blackman (1962), et al, have shown that the growth and extinction of expectancies for reward vary predictably under different experimental conditions if the tasks are perceived by S as chance. luck, or experimenter-controlled rather than as a matter of personal skill.

Several studies of the relationship between internal versus external orientation and other personality variables report significant differences between "Internals" and "Externals". Differential findings were obtained on factors such as how much useful information they had acquired about the situations they were in (Seeman and Evans, 1962; Seeman, 1963); the extent to which they preferred to have others control situations they were in as opposed to being able to behave autonomously, (Cromwell, Rosenthal, Shakow, and Zahn, 1961;

Rotter and Mulry, 1965; Watson and Baumal, 1967; Feather, 1967; Julian and Katz, 1968; and the extent to which they denied disabilities, (Lipp, Kolstoe, James, and Randall, 1968).

Further research indicates that externals tend to be more maladjusted than internals, (Hersch and Scheibe, 1967); externals tend to be less effective working in a situation calling for attitudes that denote self-conficence that they could succeed at a given task, (Cromwell, Rosenthal, Shakow, and Zahn, 1961); externals tend to be more easily influenced and have less influence on others than internal individuals, (Phares, 1965); external individuals tend to approach obstacles in an intrapunitive manner, while internals more often tend to seek constructive solutions to problems, (Butterfield, 1964); external individuals tend to manifest greater, and more enfeebling anxiety than internal individuals, (Watson, 1967; Tolor and Reznikoff, 1967); and externals tend to rate their parents as having been more authoritarian and rejecting than do individuals judged to be internally oriented, (Tolor and Tolowiec, 1968).

Other studies have been devoted to an exploration of the interaction of class and ethnic group with the personality variable internal versus external control of reinforcements. Graves and Jessor (1961), Jessor et al (1967) adopted the I - E Scale for high school students and studied ethnic differences in an isolated tri-ethnic community. Consistent with their predictions, they found whites to be most internal, followed by Spanish Americans, and that Indians were most external in attitudes.

Franklin (1963) found a significant positive relationship between higher social economic class and internality.

Battle and Rotter (1963) studied a generalized expectancy for internal versus external control of reinforcement in Negro and White 6th and 8th grade school children. (A portion of the study was devoted to developing the projective test of internal vs. external locus of control for children which will be used in the present investigation.) Major findings included:

1. The interaction of social class and ethnic group was highly related to internal-external control attitudes, with middle-class children in general significantly more internal than lower-class; while lower-class Negroes were significantly more external than Middle-class Negroes or Whites.
2. The finding that lower-class Negroes with high IQ's were more external than middle-class whites with lower IQ's might suggest that brighter lower-class Negroes may develop extreme external attitudes as a defense reaction to perceived reduced choices for external or material rewards.

Lefcourt and Ladwig (1965) found that Negroes would score more externally than whites on the I-E Scale; and that they would perform on an achievement task in a manner reflecting greater expectancy for external control of reward than would a comparative white group of subjects.

Gore and Rotter (1963), and Strickland (1965) found significant differences within the Negro population in internal-external orientation; and that the difference could be related to the type and degree of commitment behavior to effect social change; with the most external subjects being less willing to become involved in social action.

D. Parental Attitudes and Educational Aspirations

Directly related to the research proposed in this study are the findings of several investigators concerning the relationship between parental attitudes and roles and how they affect children's achievement behaviors and educational aspirations.

In several studies at the Fels Research Institute (Crandall, Dewey, Katkovsky, Preston 1964; Katkovsky, Preston, Crandall 1964; Katkovsky, Crandall, Good 1967) it was found that both parents held values for the intellectual achievement of their children, particularly their daughters, similar to those which they held for themselves. There seemed, in general, to be a trend for the parents, particularly parents of the sex opposite to the child, to translate their own achievement attitudes into their behavior with their offspring in a manner consistent with cultural stereotypes of sex roles.

Katkovsky, et al, (1967) reported that while girls whose fathers were especially affectionate and nurturant were less prone to believe that they had caused their own failures, findings generally indicated that parent behaviors characterized as warm, praising, protective, and supportive, were positively associated with children's beliefs in internal control. Conversely, "negative" parental behaviors, such as dominance, rejection, and criticality were negatively associated with beliefs in internal control.

Research indicates that important antecedents of children's beliefs that they cause the reinforcements they receive, rather than someone or something else, may be found in parent attitudes, behaviors, and in the nature of parent-child relationships. Beliefs in internal control have been shown to be well established during childhood and that they increase little from the third through the twelfth grades, (Crandall, Katkovsky, and Crandall, 1965).

Chance (1965) has reported that maternal permissiveness, early independence training, and mother's flexibility of expectations for their children were significantly related to their son's beliefs in internal control; but no significant relations were found between those maternal variables and daughter's beliefs; while Cromwell (1963) reported that adult normal males who held external control orientations perceived their mothers as protective.

The extensive report on Equality of Educational Opportunity published by the U. S. Office of Education, (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, and York, 1966), demonstrates that school achievement among children of minority groups is better predicted by this internal-external personality variable than by any of the many other attitudinal, familial, school, and teacher variables studied by them.

Chapter II
Procedure

A. Method

A sample consisted of 50 pairs of 8th grade Black boys and girls selected from schools designated as "poverty" schools by this midwestern City Board of Education.[2]

Socioeconomic status was further determined on the basis of the father's and/or mother's occupation as given on the school cummulative record. These occupations were categorized according to Lloyd Warner's classification (Warner, Meeker, and Els, 1949). This classification was used as a control variable to insure that dependent variable differences were not a function of differences in socioeconomic factors.

Subjects were matched on the basis of certain relevant variables such as sex, age, family background and number of siblings. All subjects were between the ages of 14 and 16, and had scored within the normal range of intelligence on the Lorge-Thorndike Intelligence Scale (Lorge-Thorndike Test, 1957. Boston: Houghton Mifflin Co.). (IQ's between 90 and 109) The measure of academic competence employed was the Iowa Tests of Basic Skills (IBS) (Iowa Tests of Basic Skills, State University of Iowa, 1955. Boston: Houghton Mifflin Co.). Both were administered by the St. Louis Testing Service when the student was in the 7th grade. Scores from the above two tests, readily obtainable from the cummulative records, were used to assign the students to Group A or to Group B.

One member of each pair was placed in either Group A or Group B, based upon his or her score on the Iowa Basis Skills, Achievement Test. Group A (Adequate Achievers) consisted of students whose projected scores would qualify them for the Track I level of educational achievement.[3] Group B (Underachievers) consisted of those students whose projected scores qualified them for the Track III educational achievement level. (Track II students were not used in this study.

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2. The Board of Education, using the records of the State Office of Welfare, determines the number of children on Aid for Dependent Children in each school, and compares the percentage in the city as a whole. If the percentage is equal to or greater than the city average, the school is entitled to receive government funding through the U. S. Office of Economic Opportunity. (1965).

3. The 3-Track Plan: The Public School System of this midwestern city had instigated a 3-Track Plan for the secondary

For the purpose of this study Reading and Arithmetic scores were combined to make a composite score and pupils were placed in either Group A (Adequate Achievers) or Group B (Underachievers). The IBS was given when students were in the second semester of the seventh grade year. Therefore 1.0 or one year was added to these scores in order to make them comparable to eighth grade scores and to ascertain the potential of these students as 8th grade performers.

Group A (Adequate Achievers) consisted of those students whose projected composite scores were 9.2 or above. Group B (Underachievers) consisted of those students whose projected composite scores sere 7.1 or below. Track II students whose projected composite scores were between 7.2 and 9.1 were not used in this study.

Two measures of the internal versus external control of reinforcements dimension were administered to each student. The Intellectual Achievement Responsibility (IAR) questionnaire (Crandall, Katkovsky, and Crandall, 1965) was devised to assess beliefs in internal-external responsibility for reinforcements exclusively in intellectual-academic achievement tasks and situations. It consists of 34 forced-choice items, each of which poses one internal and one external alternative as the reason for the occurrence of the event given in the item stem. Since half the items describe positive events and half describe negative events, this scale was used to yield two separate subscores for each student, one for belief in internal responsibility for successes ($I+$), the other for internal responsibility for failures ($I-$). The two I scores were also summed (I_{tot}) to provide a general index of internal beliefs across intellectual-academic reinforcements of both a positive and a negative nature.

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3. schools. Students entering high school were placed in one of the 3 tradks on the basis of the scores that they had obtained on the Iowa Basic Skills Test. The "cutting scores" which determined the track were:

	Track I	Track II	Track III
Reading	9.2	7.2 - 9.1	below 7.2
Arithmetic	9.2	7.2 - 9.1	below 7.2

Pupils entering high school were tracked in both reading and mathematics; i.e., a pupil who scored 6.9 on the Iowa Basic Skills Test in reading was placed in Track III in English, and if he scored 7.5 on the Iowa Basic Skills Test in Arithmetic, he was placed in Track II in Math.

The second test of internal-external orientation was a projective task, the "Children's Picture Test of Internal-External Control", (Battle, 1963). On this six-item cartoon test the child stated "what he would say" in various "lifelike" situations which involved the attribution of responsibility. The three of "externality", and a nondiscriminatory midpoint. The higher the score, the more external the orientation.

Each student was rated by two teachers with whom he had close contacts in the past two years on classroom behavior, attitudes, and performance (Lincoln High School, Graphic Student Evaluation Summary, 1967). An index of behavior and attitudes was established by converting the combined totals from each of the two ratings into a single score.

Students were ranked according to the index received in these areas, and the association between these ratings and other variables included in this study was determined.

One of the aims of this investigation was to investigate the relationship between parents' attitudes and reactions and the development of young children's achievement motivations and behaviors. Information regarding the parents' attitudes and reactions were obtained through interviews questionnaires, and rating scales, developed by the Fels Research Institute.[4]

The parents were asked to rate his child's competence in academic and intellectual tasks in comparison with other children his age, using the Fels Research Institute Rating Scale in the Intellectual Area. In addition, the twelve questions concerning the Intellectual Area of the Fels Research Institute Parent Reaction Questionnaire were answered by each parent.

The fourteen questions from the Intellectual Area of the Fels Research Institute Parent Interview I, regarding children's intellectual behavior (Crandall, 1963) were administered in a personal interview to further determine the attitudes of the mothers in this lower socioeconomic group toward their children's intellectual behavior. Demographic characteristics concerning the mother such as age, income, marital status, etc., were obtained during this interview. Responses were compared with other data gathered in the investigation.

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[4] Fels Research Institute, located on the campus of Antioch College, Yellow Springs, Ohio. Virginia C. Crandall, Director.

Three experienced interviewers visited the homes of the subjects used in this study in an attempt to isolate some of the significant variables related to parental attitudes concerning intellectual-academic development.[5] Only the responses of the mothers of the subjects involved in this study were analysed. Eleven variables were considered in this phase of the investigation.

Parent's Attainment Value (AV) referred to the degree of importance which the mother attached to her child's achievement performance. The interviewers accertained a rating based on the mother's report of her direct interactions with the child from which his AV for the child might be inferred. The mother at the high end of the scale (i.e., a seven rating) expressed a desire for her child to show interest, participate, exhibit effort, persistence and perform competently in a given area of achievement.

The parent's expectancy (P-E) for the child referred to the general level of competence at which the mother believed the child to be characteristically able to perform. The rating was based on the mother's subjective evaluation of the child's competence.

The parent's satisfaction-dissatisfaction (S-D) with the child's achievement behavior referred to the general amount of satisfaction versus dissatisfaction which the mother expressed regarding the child's performance in the achievement area under consideration. This variable included the mother's expressed feelings about the child's interest, participation, effort and competence. A parent who received a seven rating was one who reported experiencing frequent and strong satisfaction from his childs performance in many activities in the achievement area, while a parent rated one indicated frequent and strong dissatisfaction with many of his child's activities.

The parent's minimal standards (MS) for his child referred to the minimum level of competence on the part of the child necessary to satisfy the parent. This variable dealt with the level of competence below which the child's performance resulted in parental dissatisfaction and above which lead to satisfaction.

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[5] Inter-rater reliability coefficientsand the interview instrument used are given in Appendix I and II.

Parental instigation (P-I) referred to the degree to which the parent attempted to increase or decrease the child's participation in an achievement area. The final rating was based on a combination of judgments concerning the degree of parental dominance and coersion toward achievement activities; the amount of instigation and emphasis on competence.

Parental participation (P-P) referred to the extent the parent participates with the child in activities representing an achievement area. Participation was rated from statements in which the mother indicated that she was actually involved in the same activity as the child. A separate judgment was made for frequency (F-P-P) and for intensity (I-P-P) of the mother's particitation; using a five-point scale for each.

Positive parental reaction (P-P-R) referred to the amount of positive reactions the parent displayed to the child regarding the child's achievement behavior in a given achievement area. Included were the parent's reactions to the child's interest, participation, effort and competence. Separate ratings were made concerning the frequency (F-P-P-R) and the intensity (I-P-P-R) of the mother's positive reaction to her child's achievement effort.

Negative parental reaction (N-P-R) referred to the amount of negative reactions the mother displayed to the child regarding the child's achievement behavior in a given achievement area, which included the mother's reactions to her child's interest, participation, effort and competence. Frequency (F-N-P-R) and intensity (I-N-P-R) ratings were made separately, with the final rating based on a combination of all these.

B. Safeguards:

The following safeguards were instigated to insure the anonymity of subjects involved in this study and the confidentiality of their responses, as well asto insure their right of privacy and to eliminate any adverse effects developing from this research project.

1. Demographic information was taken from classroom records. Names, addresses, occupational information, etc., secured from this source will not be published as a result of this study. Such information was used to match students on various relevant variables in order to form the necessary groups for this research.

2. Parents were asked to sign forms granting their child permission to participate in the study. These forms gave explicit information concerning the conditions of the investigation; and, in addition, parents were informed that they could withdraw from the project at any time. No child was included in this study without the signed permission of the parent.

3. Each student was given a number and this number was placed on each test, and on the questionnaire and rating forms used by the parents. Thus, subjects were listed by number, rather than by name, for analysis of data.

C. Hypotheses

The predictions of findings included the following:

1. Adequate achievers were expected to score higher in their general belief in their own internal control of events, i.e., would tend to perceive events as contingent upon their own behaviors, which would account for their tendency to make more adequate efforts at striving for achievement. By contrast, underachievers were ecpected to score higher in the direction of external control, i.e., they would tend to have a generalized expectancy that reinforcements are not contingent upon their own behaviors, and would tend not to feel responsible for their successes and consequently limit their efforts in achievement directions.

2. The parents of adequate achievers were expected to show significantly higher concern for academic achievement and for appropriate classroom behavior than were the parents of underachievers.

3. In the more refined analysis of internal-external control of positive and negative reinforcements respectively, it was predicted that those subjects who believed that positive reinforcement was contingent upon their own behaviors would be more active, striving and directed toward classroom achievement and teacher approval of their behavior. By contrast, those students who felt that positive reinforcement was contingent upon factors external to their own behavior would be expected to be more passive, dependent, and unlikely to strive for achievement for positive reinforcement.

4. It was predicted that those students who felt that negative reinforcement was contingent upon their own behavior would tend to inhibit and suppress

their behavior resulting in negative reinforcement and would tend to be controlled and relatively inhibited in the classroom situation. By contrast, the students with the belief that negative reinforcement was not contingent upon their own behavior would be much less likely to inhibit acting out behavior in the classroom situation and would tend to show more deviant over-all behavior within that situation.

D. Statistical Analysis

Both non-parametric statistical methods and parametric statistical methods were used in the analysis of data. The subjects in this study were not randomly selected, nor were they drawn from what might be considered a normally distributed population.

The Spearman Rank-Difference Correlation and the Pearson Product Moment Correlation were used for all measures of association. The Wilcoxon Matched-Pairs Signed-Ranks Test, x^2, and t-test were employed for all assessments of differences between groups.

The null hypothesis in this research design was that no difference would be found between the students in Group A and the students in Group B in the personality variables of internal versus external control of reinforcements, in classroom behavior, and in parental attitudes concerning educational achievement, classroom behavior, and intellectual efforts. Throughout this study the .05 level of significance was accepted as the limit for the rejection of the null hypothesis.

Table 1

SPEARMAN RANK INTERCORRELATIONS AMONG THE PREDICTOR VARIABLES

	M.S.	Comp.	A.V.	Statis	M.P.R.	M.N.R.	M.T.R.$_1$	M.T.R.$_2$	$M1^{st}_{PR}$	$M1^{st}_{NR}$
1. M-S										
2. Comp.	**.29									
3. A.V.	.14	.07								
4. Statis	.16	**.36	.17							
5. MPR	.10	.09	.10	**.30						
6. MNR	-.04	.08	-.19	**-.28	-.09					
7. MTR_1	.03	.04	-.05	-.01	**.62	**.65				
8. MTR_2	.10	-.03	-.08	.07	**.54	**.41	**.73			
9. $M1^{st}_{PR}$	.02	.09	.15	*.21	**.77	-.18	**.39	**.29		
10. $M1^{st}_{NR}$	-.04	.17	*-.20	*-.21	**-.29	**.74	**.32	.03	**-.35	

*$P < .05$ **$P < .01$

Table 2

SPEARMAN RANK INTERCORRELATIONS AMONG THE PREDICTOR VARIABLES

	1. M.S.	2. R of C	3. A.V.	4. Statis.	5. MPR	6. MNR	7. MTR$_1$	8. MTR$_2$	9. MI$^{st}_{PR}$	10. MI$^{st}_{NR}$	11. Battle I-E	12. IAR-T	13. IAR-P	14. IAR-N	15. TCPE	16. DBS
11. Battle I-E	-.03	-.08	** -.22	-.07	-.12	.19	.04	.08	-.03	.21						
12. IAR-T	-.11	* .20	.11	** .26	.06	-.02	.06	.02	-.01	.04	** -.37					
13. IAR-P	.00	.15	.09	* .24	.06	-.03	.04	-.02	.03	-.02	** -.32	** .79				
14. IAR-N	-.15	* .20	.09	.18	.06	-.00	.07	.08	-.03	.07	** -.28	** .85	** .38			
15. TCPE	* .23	* .24	-.03	* .24	.02	.02	-.02	-.06	-.00	-.04	.03	.19	.13	.17		
16. DBS	.13	.16	-.07	** .33	.09	-.02	.03	.02	.02	.04	-.00	* .21	.15	.18	** .54	

*P < .05 **P < .01

Adults

Chapter III
RESULTS

A, Intercorrelations Among the Predictor Variables:

Intercorrelations among the predictor variables were computed, using the Spearman Rank Correlation Coefficient. A report of intercorrelations among the predictor variables are presented in Tables 1 and 2. There were sixteen predictor variables included in this portion of the study: Battle's Children's Picture Test of Internal-External Control of Reinforcement, (Battle I-E); Intellectual Achievement Responsibility Questionnaire (IAR-Total, Positive, and Negative Scores); Teachers' Composite Positive Evaluation Score, (TCPE); Adverse Deviant Behavior Score (ADBS); Mothers' Positive Reactivity (MPR); Mothers' Negative Reactivity (MNR); Mothers' Total Reactivity (Positive, plus negative, MTR_1); Mothers' Total Reactivity (Positive, negative, plus neutral responses, MTR_2); Mothers' Negative Response as First Response ($M1^{st}NR$); Mothers' Positive Response as First Response ($M1^{st}PR$); Mothers' Rating of Competence, (R of C); Mothers' Minimal Standards (MS); Mothers' Rating of Satisfaction (R of S); and Mothers' Attainment Value (MAV). Of the 120 correlations comprising the intercorrelational matrix for these variables, 37 were statistically significant at the .05 level, or less; with 25 of these significant at the .01 probability level. This number is obviously better than chance.

First, as might be anticipated, the correlation between the two measures of internal-external control expectancies, (IAR and Battle I-E), was highly significant, (rho = -.37, p = less than .01), and was similar to those obtained in other research, (Bialer, 1961; Battle, 1963; Rotter, 1966). The negative correlation is an artifact of the manner in which the internal-external personality construct was scored. On the IAR Questionnaire the higher the score the more internal the orientation; whereas on the Battle I-E, a high score is indicative of externality.

Both the Positive IAR subscore and the Negative IAR subscores were significantly correlated with the Battle I-E scores. (rho = -.32; -.28; respectively; p is less than .01). This indicates that subjects who are internal concerning responsibility for both successes and failures in intellectual-academic situations, tend also to be internal in situations outside the educational setting.

The correlations between the measure of internal-external orientation in intellectual-academic situations, (IAR) and teacher evaluations were highly significant. Teachers' ratings on ten items selected from the Lincoln High School Student Evaluation Form were combined to obtain the Teachers' Composite Positive Evaluation Score, henceforth referred to as the TCPE. Items selected were Responsibility, Attention, Cooperation, Interest, Self-Communication, Participation, Leadership, Emotional Stability, Aggressiveness, and Defensiveness. Weights given each item ranged from 1 to 5, with 1 indicating a low rating on the particular charcteristics, and 5 considered as a rating of very high. The weights were added for each with Aggressiveness and Defensiveness scored in the reverse direction. The scores thus obtained from the two teachers asked to rate each child were combined to form the TCPE score.[6]

Teachers' ratings on the five items selected from the Lincoln High School Student Evaluation Form were combined, as explained, in order to obtain a score pertaining to "acting-out" behavior. Items used to obtain the Deviant Behavior Score, henceforth called the DBS score, were: Compliance, Aggresiveness, Emotional Stability, Politeness, and Social Concern. Because those students who tended to score high in compliance, emotional stability, politeness and social concern tended to score low in aggressiveness and defensiveness, and vice-versa, aggressiveness and defensiveness were scored in the reverse direction in order to obtain the DBS score. For example, if a student was rated 5 in aggresseveness his score was weighted as 1 for purposes of this study; if he had been rated 2 in defensiveness his score was given a weight of 4, etc. Thus an obtained low score would indicate high degree of deviant behavior; while a high score would indicate low manifestation of deviant behavior. The scores given to students by the two teachers were combined in order to obtain a composite DBS score.

Teachers' Composite Positive Evaluation Scores (TCPE) were significantly correlated with Teachers' Deviant Behavior Scores, (DBS). (rho = .54, p is less than .01). Thus, subjects who were rated by teachers as being more responsible, attentive, interrested, etc., were also seen as being more emotionally stable, polite, and compliant and less aggressive and defensive. Subjects rated high in these areas also tended to be more internal in educational situations. (rho = .195 and .21, p less than .05). That is, adequate achievers who were more internal tended to be evaluated higher in positive classroom attitudes and behavior, and personality characteristics than were the more external subjects. However no correlation was found

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6. (In a previous study, (Lincoln High School, 1967), using 100 students, an interrater reliability coefficient of .93 was obtained. For the present study interrater reliability coefficients for schools A, B, C, D, and E were found to be .94, .93, .96, .88, and .91 respectively.)

between high teacher ratings in the areas noted above and more "lifelike" situations as measured by the Battle I-E. Parents' evaluation of their children's competence in academic and intellectual tasks and the minimal standards that they held for their child's performance in school work was also significantly correlated. (rho = .29, p is less than .01). Competence was also significantly associated with the degree of satisfaction that parents' felt concerning their child's achievement in the educational setting. (rho = .36, p is less than .01).

Parents' satisfaction with classroom performance was significantly and positively correlated with positive reactions to academic considerations (rho = .30, p less than .01); while an adverse relationahip was found between satisfaction and parents' negative reactivity. (rho = .28, p is less than .01). In like manner, parents' satisfaction was positively related to positive responses given as first responses, (rho = .21, p less than .05), and adversely related to negative responses given as first responses. (rho = .21, p is less than .05).

When the responses selected by the mothers as the one response which best described the way in which she has reacted to her child in similar situations most often are examined, a significant positive correlation is found between mother's positive response as first response and mothers' total reactivity, (rho = .29, p less than .01); and an inverse relationship with mother's negative response as a first reaction (rho = -.35,p less than .01).

Mothers' first response judged as indicating a negative reaction is found to be significantly related to the Battle I-E, which measures internal-external orientation outside an educational setting. (rho = .21, p less than .05). This correlation indicates that those students who tend to be external have mothers who tend to give a negative response as the first response to their child in academic situations, No correspondingly significant correlation was found between either negative or positive reactivity and the IAR Questionnaire, which measures the internal-external personality construct in intellectual-academic situations.

B. Some Relevant Differences Between Group A and Group B Subjects:

Hypothesis 1 predicted that adequate achievers (Group A), would score higher in their general belief in their own internal control of events than would underachievers. The data for this hypothesis are presented in Tables 3 and 4.

Table 3

RESULTS FROM WILCOXON MATCHED-PAIRS SIGNED RANKS TEST OF MEASURES OF INTERNALITY-EXTERNALITY

Measures	No. pairs Group A vs. Group B	Wilcoxon z Score	Direction	No. pairs Boys Group A vs. Group B	Wilcoxon z Score	Direction	No. Pairs Girls Group A vs. Group B	Wilcoxon z Score	Direction
Battle I-E	47	-2.58**	A > B	24	.45	ns	23	-4.2**	$G_A > G_B$
IAR Total Score	47	-5.17**	A > B	23	-3.0**	B_A B_B	24	-4.0**	$G_A > G_B$
IAR Positive	43	-4.27**	A > B	21	-2.24*	B_A B_B	22	-3.3**	$G_A > G_B$
IAR Negative	46	-3.88**	A > B	24	-1.51	ns	22	-3.8**	$G_A > G_B$

$*P < .05$ $**P < .01$ ns = Not significant

Table 4

Mean Scores For Measures of Internality-Externality

Measures	Boys and Girls Group A	Boys and Girls Group B	t-Test	Boys Group A	Boys Group B	t-Test	Girls Group A	Girls Group B	t-Test
Battle I-E	14.96	17.06	2.51*	15.84	15.04	.65	14.08	19.08	5.21**
IAR Total Score	27.92	23.96	6.40**	27.20	24.66	3.03**	28.84	23.32	6.15**
IAR Positive	13.84	11.82	5.28**	13.68	12.00	3.02**	14.00	11.64	4.44**
IAR Negative	14.08	12.14	4.88**	13.52	12.60	1.63	14.64	11.68	5.57**

*P < .05

**P < .01

Results from the Wilcoxon Matched-Pairs Signed-Ranks Test indicated a significant difference between the total Battle Children's Picture Test of I-E; with adequate achievers (Group A) found to be significantly more internal than the underachievers, (Group B), ($z = -2.58$; $p = .0049$). Similar results are noted for the t-test analysis ($t = 2.51$, p less than .05).

When boys and girls were considered separately, girls in Group A were found to be significantly more internal than girls in Group B, but no comparable significant differences were found for the boys. There tends to be no significant difference between the internal orientation of the boys in Group A and Group B, as measured by the Battle I-E. (Girls: $z = -4.2$; $p = .00003$. $t = 5.21$, p less than .01. Boys: $z = .45$; $p = .3264$. $t = .65$).

An analysis of the total internal control of reinforcement scores on the IAR revealed significant differences between Group A and Group B, with Group A subjects found to be significantly more internal than Group B subjects. When boys and girls were considered separately, girls in Group A were found to be significantly more internal than girls in Group B; and in like manner, boys in Group A were significantly more internal than boys in Group B. (Total: $z = -5.17$; $p = .00003$; $t = 6.40$, p less than .05. Girls: $z = -4.0$; $p = .00003$; $t = 6.15$, p less than .05. Boys: $z = -3.0$; $p = .0013$; $t = 3.03$, p less than .05).

In addition to a total score on internal control of reinforcement, the IAR Questionnaire provides a score for internal control of positive reinforcement and for internal control of negative reinforcement. Group A subjects were found to be significantly more internal in control of positive reinforcement than Group B subjects. ($z = -4.27$; $p = .00003$). When boys and girls were considered separately, Group A girls, and Group A boys were found to be significantly more internal on this variable than were Group B girls and Group B boys. (Girls: $z = -3.3$, p is less than .01. Boys: $z = -2.24$, p less than .05. Girls: $t = 3.02$; p less than .01. Boys: $t = 4.44$; p less than .01.)

As in the case with positive reinforcement, Group A subjects were found to be significantly higher in internal control of negative reinforcement than were subjects in Group B. ($z = -3.88$; $p = .00007$. $t = 4.88$; p less than .01). Also while Group A girls were revealed to be significantly more internal on this dimension than were Group B girls, there was only a trend in this direction for the boys. (Girls: $z = -3.8$; $p = .00007$. $t = 5.57$; p is less than .01. Boys: $z = -1.51$; $p = .0655$; $t = 1.63$; ns).

Results concerning teachers' ratings are presented in Tables 5, 6, and 7.

As expected, both Group A boys and Group A girls were rated significantly higher than Group B boys and girls by teachers on the above variables in all conditions. ($z = -5.71$, p less than .01; $t = 6.43$, p less than .01).

Thus teachers tended to see Group A subjects as more responsible, attentive; cooperative, interested, and polite; and less aggressive, defensive and preoccupied than were Group B subjects. In addition, they saw Group A subjects as manifesting more emotional stability, social concern, and participation than Group B subjects.

Ratings given to students by teachers on 5 relevant items of the Lincoln Student Evaluation Form were combined to form an "acting-out", or "Deviant Behavior Score" (DBS). Results from this analysis indicated that Group B subjects tended to be rated by teachers, significantly higher in "acting-out" behavior than Group A subjects. ($z = -3.57$; $p = .00023$; $t = 3.66$, p is less than .01).

Table 8 presents chi-square data for achievement as related to internal versus external control of positive and negative reinforcement. As can be seen, subjects in Group A tend to be significantly higher in both internal control of positive and negative reinforcement than do subjects in Group B, ($x^2 = 51.60$, p is less than .001).

Chi-square results indicated that subjects who were internal for both positive and negative reinforcement were evaluated significantly higher in appropriate classroom behavior and attitudes than were subjects who were more external for positive and negative reinforcement. (See table 9).

Hypothesis 3 predicted that those subjects who believe that positive reinforcement is contingent upon their own behaviors would be more active, striving and directed toward classroom achievement and teacher approval of their behavior, and thus would be evaluated more positively on these variables by teachers than would subjects who believe that positive reinforcement is contingent upon factors external to their own behavior. When data for internal control of positive reinforcement, only, are analysed, the findings are in the predicted direction. (See table 10).

In like manner, Hypothesis 4 predicted that subjects who felt that negative reinforcement was contingent upon their own behavior would tend to inhibit and suppress behavior which they believed would result in negative rein-

Table 5

TEACHERS' EVALUATION OF CLASSROOM BEHAVIOR AND ATTITUDES, AND PERSONALITY CHARACTERISTICS

	Compositive Positive Evaluation of Classroom Behavior			Deviant Behavior Score
	Group A vs. Group B	G_A vs. G_B	B_A vs. B_B	Group A vs. Group B
Number of Pairs	49	25	24	42
Wilcoxon z Score	-5.71	-3.92	-4.1	-3.57
P	.00003	.00005	.0003	.00023
Direction	$A > B$	$G_A > G_B$	$B_A > B_B$	$B > A$

G_A = Girls - Adequate Achievers
G_B = Girls - Underachievers
B_A = Boys - Adequate Achievers
B_B = Boys - Underachievers

Table 6

MEAN SCORES FOR TEACHER RATINGS

Variable	Boys and Girls in GroupA	Boys and Girls in Group B	t-Test	Boys Group A	Girls Group A	t-Test	Boys Group B	Girls Group B	t-Test
Teachers Composite Positive Evaluation	32.60	26.50	6.43**	31.84	33.36	-1.12	25.28	27.72	-1.89
Deviant Behavior Score	17.18	15.22	3.66**	16.36	18.00	-2.93**	14.56	15.88	-1.51

*$P < .05$ **$P < .01$

Deviant Behavior Score - High score means less acting-out.

Table 7

MEAN SCORES FOR TEACHER RATINGS

Variable	Boys Group A and Group B	Girls Group A and Group B	t-Test	Boys Group A	Boys Group B	t-Test	Girls, Group A	Girls, Group B	t-Test
Teacher's Composite Positive Evaluation	28.56	30.54	-1.78	31.84	25.28	4.75**	33.36	27.72	4.47**
Deviant Behavior Score	15.46	16.94	-2.69**	16.36	14.56	2.45*	18.00	15.88	2.89**

*P < .05 **P < .01

Table 8

CHI-SQUARE FOR ACHIEVEMENT AS RELATED TO INTERNAL-EXTERNAL CONTROL OF POSITIVE AND NEGATIVE REINFORCEMENT

	Group A	Group B	Totals
IP, IN	38(23.50)	9(23.50)	47
EP, EN	0(10)	20(10)	20
IP, EN	6(9)	12(9)	18
EP, IN	6(7.5)	9(7.5)	15
Totals	50	50	100 = N

$x^2 = 51.60$

p = less than .001

df = 3

Number in parenthesis equals expected frequencies

IP, IN = Int. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

EP, EN = Ext. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

IP, EN = Int. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

EP, IN = Ext. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

forcement; and thus would appear to be appropriately controlled and inhibited in the classroom situation. The opposite would be true of students who believed that negative reinforcement was contingent upon external forces. Such subjects would tend to exhibit more acting-out and deviant behavior in the school setting. Teachers ratings of positive behavior would be expected to be higher for the former group than for the latter group. An analysis of data relative to Hypothesis 4, using chi-square, is presented in Table 11. Findings are revealed to be in the expected direction.

When all subjects are considered, (both Group A and Group B), subjects who are internal concerning control of negative reinforcement tend to be rated by teachers as manifesting less "acting-out" and deviant classroom behavior, than were the subjects who are external concerning control of negative reinforcement. (Low D.B.S. means more acting-out).

When the two groups were considered separately, no significant difference was found between subjects in Group A in the ratings in deviant behavior given by teachers to students who were internal for control of negative reinforcement and students who were external for control of negative reinforcement. Thus, teachers tend to give both internal and external students in Group A similar ratings involving "acting-out" behavior. (See table 12.)

When Group B subjects were analysed separately significance was at the .09 level, which indicates a tendency for Group B subjects who were more internal for control of negative reinforcement to be rated by teachers as displaying less "acting-out" or deviant behavior than were Group B subjects who were more external for control of negative reinforcement. (See table 13).

In further analysis of the data, chi-square were run for the total group; for Group A and for Group B, in order to determine the relationship between Inverse Deviant Behavior Scores and internal versus external control of positive reinforcement. Findings relevant to this portion of the study are summarized in Tables 14, 15, and 16. No significant difference is found when the total group is considered or when Group A was considered. When data involving Group B were analysed, it was found that Group B subjects who were external for control of positive reinforcement tended to be evaluated by teachers as displaying more deviant behavior than did subjects who were more internal for positive reinforcement. (x^2 - 7.22, p less than .01).

Table 9

CHI-SQUARE FOR TEACHER'S COMPOSITE POSITIVE EVALUATION AS RELATED TO CHILDREN'S INTERNAL-EXTERNAL CONTROL OF REINFORCEMENT ORIENTATION FOR POSITIVE AND NEGATIVE REINFORCEMENT

	TCPE 29, above	TCPE 28, below	TCPE 29, above	TCPE 28, below	Totals
IP, IN	31(19.74)	7(3.76)	4(8.46)	5(26.88)	47
EP, EN	0(9.24)	0(1.60)	9(3.6)	11(6.4)	20
IP, EN	7(7.98)	0(1.52)	3(3.42)	9(6.08)	19
EP, IN	4(2.72)	1(1.12)	2(2.52)	7(4.48)	14
Totals	42	8	18	32	100 = N

$X^2 = 57.71$

P = less than .001

df = 9

Number in parenthesis equals expected frequencies

TCPE = Teacher Composite Positive Evaluation

IP, IN = Int. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

EP, EN = Ext. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

IP, EN = Int. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

EP, IN = Ext. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

Table 10

CHI-SQUARE FOR TEACHERS' COMPOSITE POSITIVE EVALUATION AS RELATED TO CHILDREN'S INTERNAL-EXTERNAL CONTROL OF REINFORCEMENT ORIENTATION FOR POSITIVE REINFORCEMENT

Control of Positive Reinforcement	TCPE 29, above	TCPE 28, below	Totals
Internal IP, IN IP, EN	43(39.60)	21(26.40)	66
External EP, IN EP, EN	15(20.40)	19(13.60)	34
	60	40	100 = N

$X^2 = 5.73$

P = .02

df = 1

Median = 29

Number in parenthesis equals expected frequencies

TCPE = Teachers' Composite Positive Evaluation

IP, IN = Int. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

IP, EN = Int. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

EP, IN = Ext. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

EP, EN = Ext. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

Table 11

CHI-SQUARE FOR INVERSE DEVIANT BEHAVIOR SCORES FOR TOTAL GROUP AS RELATED TO INTERNAL-EXTERNAL CONTROL OF NEGATIVE REINFORCEMENT

Control of Negative Reinforcement	Total A + B Inverse DBS 17, or Above	Total A + B Inverse DBS 16, or Below	Totals
Internal IP, IN EP, IN	39(31.50)	24(31.50)	63
External IP, EN EP, EN	11(18.50)	26(18.50)	37
Totals	50	50	100 = N

$X^2 = 9.66$

P = significant beyond 0.01 level

df = 1

DBS = Deviant Behavior Scores

Median = 17

IP, IN = Int. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

EP, IN = Ext. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

IP, EN = Int. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

EP, EN = Ext. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

Table 12

CHI-SQUARE FOR INVERSE DEVIANT BEHAVIOR SCORES FOR GROUP A AS RELATED TO INTERNAL-EXTERNAL CONTROL OF NEGATIVE REINFORCEMENT

Control of Negative Reinforcement	Group A Inverse DBS 18 or Above	Group A Inverse DBS 17 or Below	Totals
Internal IP, IN EP, IN	21(20.24)	23(23.76)	44
External IP, EN EP, EN	2(2.76)	4(3.24)	6
Totals	23	27	50 = N

X^2 = .50

P = .50 (N. S. difference)

df = 1

Median = 18.23

DBS = Deviant Behavior Scores

IP, IN = Int. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

EP, IN = Ext. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

IP, EN = Int. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

EP, EN = Ext. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

Number in parenthesis equals expected frequencies.

Table 13

CHI-SQUARE FOR INVERSE DEVIANT BEHAVIOR SCORES FOR GROUP B AS RELATED TO INTERNAL-EXTERNAL CONTROL OF NEGATIVE REINFORCEMENT

Control of Negative Reinforcement	Group B Inverse DBS 16 or Above	Group B Inverse DBS 15 or Below	Totals
Internal IP, IN EP, IN	13(10.26)	6(8.74)	19
External IP, EN EP, EN	14(16.74)	17(14.26)	31
Totals	27	23	50 = N

$X^2 = 2.56$

$P = .09$

df = 1

DBS = Deviant Behavior Scores

Median = 15.66

IP, IN = Int. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

EP, IN = Ext. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

IP, EN = Int. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

EP, EN = Ext. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

Number in parenthesis equals expected frequencies.

Table 14

CHI-SQUARE FOR INVERSE DEVIANT BEHAVIOR SCORES FOR TOTAL GROUP AS RELATED TO INTERNAL VERSUS EXTERNAL CONTROL OF POSITIVE REINFORCEMENT

Control of Positive Reinforcement	Total A + B Inverse DBS 17 or Above	Total A + B Inverse DBS 16 or Below	Totals
Internal IP, IN IP, EN	36(33)	30(33)	66
External EP, IN EP, EN	14(17)	20(17)	34
Totals	50	50	100

$X^2 = .016$

P = .80 (no significant difference)

df = 1

DBS = Deviant Behavior Scores

Median = 17

IP, IN = Int. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

IP, EN = Int. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

EP, IN = Ext. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

EP, EN = Ext. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

Table 15

CHI-SQUARE FOR INVERSE DEVIANT BEHAVIOR SCORES FOR GROUP A AS RELATED TO INTERNAL-EXTERNAL CONTROL OF POSITIVE REINFORCEMENT

Control of Positive Reinforcement	Group A Inverse DBS 18 or Above	Group A Inverse DBS 17 or Below	Totals
Internal IP, IN IP, EN	25(23.76)	19(20.24)	44
External EP, IN EP, EN	2(3.24)	4(2.76)	6
Totals	27	23	50 = N

Median = 18.33

$X^2 = 1.16$

P = .30 (No significant difference)

df = 1

DBS = Deviant Behavior Scores

IP, IN = Int. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

IP, EN = Int. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

EP, IN = Ext. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

EP, EN = Ext. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

Number in parenthesis equals expected frequencies.

Table 16

CHI-SQUARE FOR INVERSE DEVIANT BEHAVIOR SCORES FOR GROUP B AS RELATED TO INTERNAL-EXTERNAL CONTROL OF POSITIVE REINFORCEMENT

Control of Positive Reinforcement	Group B Inverse DBS 16 or Above	Group B Inverse DBS 15 or Below	Totals
Internal IP, IN IP, EN	13(11.5)	12(13.5)	25
External EP, IN EP, EN	10(11.5)	15(13.5)	25
Totals	23	27	50 = N

$X^2 = 7.22$

P = less than .01

df = 1

DBS = Deviant Behavior Scores

Median = 15.66

IP, IN = Int. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

IP, EN = Int. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

EP, IN = Ext. Control of Pos. Reinf.; Int. Control of Neg. Reinf.

EP, EN = Ext. Control of Pos. Reinf.; Ext. Control of Neg. Reinf.

Number in parenthesis equals expected frequencies.

Data for Hypothesis 2, which predicted that parents of adequate achievers would tend to be significantly more reactive to their children's achievement behaviors in intellectual situations and activities than would parents of underachievers are presented in Tables 17, 18, and 19. Since mothers only were requested to respond to the questionnaires, regardless of whether the child had both parents in the home or only the mother in the home, the results involving only mothers' responses are presented.

Hypothesis 2 was not supported by evidence collected in this research when total number of positive and total number of negative reactivity scores, and the total score obtained from a combination of the two scores were analyzed. No significant difference was found between the parents of Group A students and the parents of Group B students in either positive or negative reactivity when all such responses were considered. Thus, the parents of both Group A and Group B subjects tended to be equally responsive to their children, both positively and negatively, in the intellectual area as measured by the Fels Research Institute Parent Reaction Questionnaire.

When the total number of responses, positive, negative and neutral, given as 1st, 2nd and/or additional reactions to their children's abilities, interests and performances in the intellectual area were inspected, significant differences between the two groups were revealed. The mothers of Group A subjects gave significantly more total responsesthan did the mothers of Group B subjects. ($z = -1.77$, $p = .0384$).

When the responses selected by the mothers as the *one* response which *best* described the way in which she has reacted to her child in similar situations most often are examined, no significant difference is found between the two groups in the responses judged to be positive. A significant difference was found when negative responses given as first reactions were examined. Mothers' of Group B subjects were found to give significantly more negative responses as first reactions than did mothers' of Group A subjects.

Tables 18 and 19 provide data involving Hypotheses 2 which predicts that the mothers of Group A students would be expected to rate their children significantly higher in competence; set higher minimal standards and hold higher attainment values for their children; and in addition would indicate that they were significantly more satisfied with their children's performance in intellectual activities; than would the parents of Group B students.

Table 17

REACTIVITY OF MOTHERS TO THEIR CHILDREN'S INTELLECTUAL ACHIEVEMENT ACTIVITIES

	PR	NR	TR^A	$1^{st}PR$	$1^{st}NR$	MTR^B
	M^+_A vs. M^+_B	M^-_A vs. M^-_B	M_A^{TA} vs. M_B^{TA}	M_A^{1PR} vs. M_B^{1PR}	M_A^{1NR} vs. M_B^{1NR}	M_A^{TB} vs. M_B^{TB}
Number of Pairs	47	48	48	46	44	49
Wilcoxon z Score	-1.36	-.61	-.672	-.054	-1.79	-1.77
P	.0869	.2709	.2514	.4801	.0367	.0384
Direction	NS	NS	NS	NS	$M_B^{1NR} > M_A^{1NR}$	$M_A^{TB} > M_B^{TB}$

PR - Positive Response

NR - Negative Response

TR^A - Total Positive Plus Negative Responses

$1^{st}PR$ - Mothers' 1st Positive Response

$1^{st}NR$ - Mothers' 1st Negative Response

MTR^B - Mothers' Total Responses (Negative, Positive, Neutral, and Additional)

NS - No significant difference

Table 18

MOTHERS' ATTITUDES TOWARD THE ACHIEVEMENT
BEHAVIORS OF THEIR CHILDREN

	Minimal Standards	Attainment Value	Competence Evaluation	Parental Satisfaction
	M_A vs. M_B	M_A vs. M_B	M_A vs. M_B	M_A vs. M_B
Number of Pairs	44	23	38	42
Wilcoxon z Score	.288	.24	-4.03	-2.67
P	.3897	.4052	.00003	.0038
Direction	NS	NS	A > B	A > B

M_A = Mothers' Adequate Achievers

M_B = Mothers' Underachievers

NS = No significant difference

Table 19

MOTHERS' MEAN SCORES ON RESPONSES TO QUESTIONNAIRE CONCERNING THEIR CHILDREN'S ACADEMIC-INTELLECTUAL ACHIEVEMENT

Variables	Mothers, Group A	Mothers, Group B	t-Test	Mothers, Boys, A	Mothers, Boys, B	t-Test	Mothers, Girls -A	Mothers, Girls -B	t-Test
Mothers Minimal Standards	4.70	4.14	1.63	5.00	3.76	3.03**	4.40	4.52	-0.22
Mothers Rating of Competence	6.00	5.66	1.43	5.92	5.44	1.27	6.08	5.88	.69
Attainment Value	5.40	5.44	-0.24	5.52	5.52	0	5.28	5.36	-0.29
Satisfaction vs. Dissatisfaction	6.34	5.44	3.09**	6.16	5.24	2.15*	6.52	5.64	2.22*
1st Positive Response	4.62	4.58	.10	4.56	4.68	-0.22	4.68	4.48	.32
1st Negative Response	7.26	6.98	.24	6.20	7.12	-1.69	8.32	6.84	.66
Total Responses	27.02	23.68	1.83	24.48	22.00	.98	29.56	25.36	1.65

$^{*}P < .05$ $^{**}P < .01$

No significant differences were found between the parents of Group A students and the parents of Group B students in the minimal standards they held for their children, nor in the degree of importance they attributed to their child doing well in school. Both groups of parents tended to set high minimal standards for their children and to feel that it was very important for their children to do well in school.

However, there were significant differences between the parents of Group A subjects and the parents of Group B subjects in the way that they rated their children in competence and in the parents rating of satisfaction with their children's school progress. Parents of Group A students tended to feel that their children were more competent than did the parents of Group B students. The parents of the Group A students also tended to feel more satisfaction in the progress made by their children in the school setting.

Tables 20 and 21 presents the mean scores and t-test analysis of the responses made by mothers to the interview questions presented to them. Results indicated that when the responses of the mother's of the total Group A (boys and girls) were compared with the mother's of the total Group B, no significant differences were found, except for Satisfaction-Dissatisfaction. (t = 2.19, p less than .05). The mother's of subjects in Group A manifested significantly more satisfaction concerning their children's academic-intellectual achievement than did the mother's of the subjects in Group B.

When the mother's of the boys in Group A were compared with the mother's of the boys in Group B, no significant differences were found, except concerning the variable Satisfaction-Dissatisfaction. (t = 2.36, p less than .05). No significant differences were found between mothers of Group A girls and the mothers of Group B girls in any area.

C. Sex Differences

Tables 22, 23, 24, 25, 26, 27, and 28 present results of analyses of sex differences for the predictor variables employed in the research. When boys in both groups were compared with girls in both groups on total internal versus external control of reinforcements as measured by both the IAR and the Battle I-E, no significant differences were found between boys and girls in this variable.

When the two groups were considered separately, no significant difference was found between boys and girls in Group A on internal control of reinforcement as measured by the Battle I-E. However, when the boys and girls in Group B were compared, a significant difference was found, with boys in Group B found to be more internal than girls in Group B. (z = -3.02, p = .0011; t = -3.55, p less than .01).

Table 20

MOTHER'S MEAN SCORES ON INTERVIEW RESPONSES CONCERNING THEIR CHILDREN'S ACADEMIC-INTELLECTUAL ACHIEVEMENTS

Variables	Mother's Total Group A	Monter's Total Group B	t-Test	Mother's Boys Group A	Mother's Boys Group B	t-Test	Mother's Girls Group A	Mother's Girls Group B	t-Test
Attainment Value	5.40	5.50	.39	5.28	5.12	0.44	5.52	5.58	1.01
Parents' Expectancy	5.00	4.66	1.24	4.76	4.12	1.68	5.24	5.20	.11
Satisfaction vs. Dissatisfaction	5.18	4.58	2.19*	4.96	4.00	2.36*	5.40	5.16	.73
Minimal Standards	4.28	3.90	1.21	3.96	3.44	1.15	4.60	4.36	.58
Parental Instigation	4.06	4.00	.22	3.80	3.80	0.00	4.32	4.20	.30
Frequency Parental Participation	3.44	3.32	.32	3.36	3.16	0.40	3.52	3.48	.07

*P < .05 **P < .01

Table 21

MOTHER'S MEAN SCORES ON INTERVIEW RESPONSES CONCERNING THEIR CHILDREN'S ACADEMIC-INTELLECTUAL ACHIEVEMENTS

Variables	Mother's Total Group A	Mother's Total Group B	t-Test	Mother's Boys Group A	Mother's Boys Group B	t-Test	Mother's Girls Group A	Mother's Girls Group B	t-Test
Intensity Parental Participation	3.54	3.20	.93	3.06	2.92	1.34	3.48	3.48	.00
Frequency Positive Parental Reaction	4.38	4.08	.98	4.48	3.80	1.62	4.28	4.36	.18
Intensity Positive Parental Reaction	4.02	3.94	.26	3.92	3.60	0,78	4.12	4.28	.36
Frequency Negative Parental Reaction	3.10	3.32	.89	3.82	3.56	1.30	3.08	3.08	.00
Intensity Negative Parental Reaction	3.20	3.56	1.26	3.40	3.72	0.80	3.00	3.40	.97

When the two groups were considered separately concerning the total score on the IAR, Girls in Group A were found to be significantly more internal on the total IAR, and for internal control of negative reinforcements than were boys. (t = -2.07, p less than .05; t = -2.69, p less than .01). No significant differences were noted between boys and girls in Group B.

When the total group of boys were compared with the total group of girls, girls were found to be rated significantly higher by teachers on classroom behavior and activities, and personality characteristics. (See Table 24.) (z = -2.18, p less than .05).

When the two groups were considered separately, no significant difference was found between boys and girls in Group A in this variable. A significant difference was found between boys and girls in Group B, with girls in Group B evaluated significantly higher by teachers than boys in Group B. (z = -1.23, p less than ns; z = -2.54, p is less than .01).

Table 25 presents t-test analysis of TCPE and DBS. As can be noted, girls tend to manifest less "acting-out" and deviant behavior than do boys. (High DBS score indicates less acting-out behavior.) (t = -2.69. p less than .01; t = -2.93, p less than .01).

When the total group was considered, the parents of girls were found to be significantly more reactive concerning their daughter's intellectual achievements, (i.e. gave a larger number of total reactions concerning their children's intellectual activities), than were the parents of the boys in this study. (See table 26. t = -2.34, p less than .05; t = -2.11, p less than .05).

Concerning sex differences found relating to responses from the personal interview, when the mothers of all boys were compared with the mothers of all girls, (see Table 26), significant differences were found for the variables concerning Parent's-Expectancy, (t=2.95, p less than .01); Satisfaction-Dissatisfaction, (t=2.98, p less than .01); and Minimal Standards, (t=2.55, p less than .05). The mother's of girls expressed higher expectancy levels, higher degree of satisfaction with their daughter's accomplishments, and higher minimal standards in the academic area, than did the mothers of the boys.

When the mother's of the boys in Group A were compared with the mother's of the girls in Group A, no significant differences were found on any variable except in minimal standards. The mothers of Group A Girls held higher minimal standards for their daughters than did the mother's of Group A boys, (t = 2.07, p less than .05). When the mother's of the boys in Group B were compared with the mother's of the girls in Group B, no significant differences were found on any of the variables.

Table 22

WILCOXON MATCHED-PAIRS SIGNED RANKS TEST OF MEASURES OF INTERNALITY-EXTERNALITY

AS RELATED TO SEX DIFFERENCES

Measures	No. Pairs Boys Group AB vs. Girls, AB	Wilcoxon z Score	Direction	No. Pairs Boys - A vs. Girls - A	Wilcoxon z Score	Direction	No. Pairs Boys - B vs. Girls - B	Wilcoxon z Score	Direction
Battle I-E	47	-1.47	ns	23	-1.20	ns	24	-3.02^{**}	$B_B > G_B$
IAR Total Score	44	.905	ns	24	-1.45	ns	24	-.86	ns

*P < .05 **P < .01 ns = Not significant

Table 23

MEAN SCORES FOR MEASURES OF INTERNALITY-EXTERNALITY

SEX DIFFERENCES

Measures	Boys, Group A and Group B	Girls, Group A and Group B	t-Test	Boys, Group A	Girls, Group A	t-Test	Boys, Group B	Girls, Group B	t-Test
Battle I-E	15.44	16.58	-1.33	15.84	14.08	1.63	15.04	19.08	**-3.55
IAR Total Score	25.90	25.98	-0.11	27.20	28.64	*-2.07	24.60	23.32	1.28
IAR Positive	12.84	12.82	.05	13.68	14.00	-0.66	12.00	11.64	.60
IAR Negative	13.06	13.16	-0.23	13.52	14.64	**-2.69	12.60	11.68	1.40

TABLE [illegible]

SEX DIFFERENCES
TEACHERS' COMPOSITE POSITIVE EVALUATION OF CLASSROOM BEHAVIOR AND ATTITUDES, AND PERSONALITY CHARACTERISTICS

	Boys vs. Girls	B_A vs. G_A	B_B vs. G_B
Number of Pairs	47	24	24
Wilcoxon z Score	-2.18	-1.23	-2.54
P	.0146	.1093	.0055
Direction	G > B	NS	$G_B > B_B$

B_A = Boys - Adequate Achievers
G_A = Girls - Adequate Achievers
B_B = Boys - Underachievers
G_B = Girls - Underachievers
NS = No significant difference

Table 25

MEAN SCORES FOR MEASURES OF TCPE AND DBS

SEX DIFFERENCES

Measures	Boys, A & B	Girls, A & B	t-Test	Boys, Group A	Girls, Group A	t-Test	Boys, Group B	Girls, Group B	t-Test
TCPE	28.56	30.54	-1.78	31.84	33.36	-1.12	25.28	27.72	-1.89
DBS	15.46	16.94	-2.69^{**}	16.36	18.00	-2.93^{**}	14.56	15.88	-1.51

$^{*}P < .05$ $^{**}P < .01$

Table 26

MOTHERS' MEAN SCORES ON RESPONSES TO QUESTIONNAIRE CONCERNING THEIR CHILDREN'S ACADEMIC-INTELLECTUAL ACHIEVEMENTS

SEX DIFFERENCES

Variables	Mothers, Boys, AB	Mothers, Girls, AB	t-test	Mothers, Boys, A	Mothers, Girls, A	t-test	Mothers, Boys, B	Mothers, Girls, B	t-test
Mothers Minimal Standards	4.38	4.46	-0.23	5.00	4.40	1.31	3.76	4.52	-1.51
Mothers Rating of Competence	5.68	5.98	-1.26	5.92	6.08	-0.53	5.44	5.88	-1.20
Attainment Value	5.52	5.32	1.19	5.52	5.28	.96	5.52	5.36	.69
Satisfaction vs. Dissatisfaction	5.70	6.08	-1.26	6.16	6.52	-0.95	5.24	5.64	-0.90
1^{st} Positive Response	4.62	4.58	.10	4.56	4.68	-0.24	4.68	4.48	.31
1^{st} Negative Response	6.66	7.58	-0.80	6.20	8.32	-0.95	7.12	6.84	.47
Total	23.24	27.46	-2.34*	24.48	29.56	-2.11*	22.00	25.36	-1.27

Table 27

MOTHER'S MEAN-SCORES ON INTERVIEW RESPONSES CONCERNING THEIR CHILDREN'S ACADEMIC-INTELLECTUAL ACHIEVEMENTS

SEX DIFFERENCES

Variables	Mother's Boys Group A&B	Mother's Girls Group A&B	t-test	Mother's Boys Group A	Mother's Girls Group A	t-test	Mother's Boys Group B	Mother's Girls Group B	t-test
Attainment Value	5.20	5.70	1.97	5.28	5.52	.90	5.12	5.58	-2.00
Parent's Expectancy	4.44	5.22	2.95**	4.76	5.24	1.71	4.12	5.20	-.23
Satisfaction vs. Dissatisfaction	4.48	5.28	2.98**	4.96	5.40	1.64	4.00	5.16	-.21
Minimal Standards	3.70	4.48	2.55*	3.96	4.60	2.07*	3.44	4.36	-.33
Parental Instigation	3.80	4.26	1.71	3.86	4.32	1.79	3.80	4.20	-.75
FREQUENCY Parental Participation	3.26	3.50	0.64	3.36	3.52	.41	3.16	3.48	-1.16

Table 28

MOTHER'S MEAN SCORES ON INTERVIEW RESPONSES CONCERNING THEIR CHILDREN'S ACADEMIC-INTELLECTUAL ACHIEVEMENTS

SEX DIFFERENCES

Variables	Mother's Boys Group A&B	Mother's Girls Group A&B	t-test	Mother's Boys Group A	Mother's Girls Group A	t-test	Mothers Boys Group B	Mother's Girls Group B	t-test
Intensity Parental Participation	3.26	3.48	0.60	3.06	3.48	1.39	2.92	3.48	-.49
Frequency Positive Parental Reaction	4.14	4.32	0.59	4.48	4.28	.68	3.80	4.36	-.50
Intensity Positive Parental Reaction	3.76	4.20	1.47	3.92	4.12	.59	3.60	4.28	-.39
Frequency Negative Parental Reaction	3.34	3.08	1.05	3.12	3.08	.16	3.56	3.08	[illegible].52
Intensity Negative Parental Reaction	3.56	3.20	1.26	3.40	3.00	1.47	3.72	3.40	+.94

Discussion

Earlier findings by Crandall, Katkovsky, and Preston (1962), Cellura, (1964) and Chance (1965), are supported by the results of this investigation. These authors had suggested that a belief in self-responsibility constitutes a motivational influence upon achievement performances in that the child who feels that he, rather than someone else, is responsible for his successes and failures appears to show greater initiative in seeking higher grades, intellectual rewards, and teacher approval.

One source of explanation for some of the findings in this study is Rotter's (1954) social learning theory. Rotter asserts that the potentiality of any behavior occurring in a given situation is some function of the expectation that the particular behavior will lead to a goal, and the reinforcement value of that goal, (expressed in his fundamental formula $B.P. = f(E/R.V.)$). Thus the behavior that a child manifests should be a process involving the choice among alternative behaviors of those behaviors with the highest potential of maximizing learned gratification in a given context. Rotter (1960) has pointed out that internally defined needs in a psychological situation, (the meaningful environment in which behavior occurs), do not solely determine behavior. Rather the goals available in the situation and the accessibility of the goals, or the expectations that a given individual has of attaining his valued goals, or the particular situation determines whether the dispositions will actually occur. These expectations also represent the consequences of experience in a particulr type of psychological environment. The constant exposure to conditions in which past success has been limited, and/or seems unavailable in the present, generally leads to low expectations of future success.

Thus underachievers and adequate achievers are presumed to have been differentially rewarded by parents, teachers and other significant persons for stating beliefs indicating that they rather than other persons were responsible for the successes and failures they experienced in intellectual achievement situations. Since intellectually proficient students more often rewarded, with praise, promotions, high grades, and therefore are more willing to admit responsibility for such instances. On the otherhand, the less proficient students more often receive negative rewards, (low grades, punishments, etc.) which result in lowered self esteem in academic situations, and therefore are less prone to admit that they cause these consequences in such situations; and are more prone to blame external forces.

Studies by Efran (1963), Lipp, Kolstoe, and Randall (1967), and Phares (1968) collaborated in the finding that external subjects were more defensive and thus had provided themselves with a less threatening explanation for their failure. It is conjectured that since the children in the adequate achieving group have failed less often in academic situations they do not feel as great a need to be and/or feel defensive about their failures. They have not as often practiced defensiveness in this area nor have they as often been reinforced for being defensive in situations in which they have failed. By contrast, the children in the underachieving group should develop more extreme external attitudes than the children in the adequate achieving group as a defense reaction to perceived reduced opportunities and choices for intellectual and academic rewards.

In line with the theorizing above, when the two subscores on the IAR, internal control of positive reinforcement, (I+), and internal control of negative reinforcement, (I-), were analyzed separately, the adequate achievers were found to be significantly more internal in control of both positive and negative reinforcement than were underachievers. When boys and girls were considered separately, girls in the adequate achievers group were revealed to be significantly more internal on both variables than were the girls in the underachievers group, while only a comparable significant difference was found for the boys on internal control of positive reinforcement, but not for internal control of negative reinforcement.

Expectations concerning the likelihood of success or failure reflect social learning in the sense that they are built up for specific and related behaviors as a consequence of the individual's direct or indirect history of positive and negative reinforcements (Rotter, 1960). The data indicate that adequate achieving girls are more prone to assign responsibility to themselves rather than to others for both the successes and failures which eventuated from their intellectual achievement efforts. The differential reinforcement history experienced by adequate achieving girls as contrasted with boys, probably results in their not feeling as great a need to be defensive about failures, as is true in the case of both adequate achieving and underachieving boys.

The lack of a clear differientiation between boys in the adequate achieving group and boys in the underachieving group relative to negative reinforcement suggests that basically the culture is the same in this respect for all boys in this socio-economically disadvantaged group. They tend to see the world with some degree of anomie; and themselves as having little control over their destinies in intellectual-academic achievement situations when negative reinforcements are involved. Thus, for Afro-American boys externalization might be both an adaptation and a reaction to a real situation in which they perceive themselves as being in a marginal position in an "All Powerful Society". For this group of boys perceiving locus of control as external represents an effort to cope with feelings of despair and hopelessness that arise from their realizing the improbability of successful achievement in the prevailing educational situation.

The Battle I-E, a more "unstructured" measure of internal versus external control than the IAR, also indicated that when the total group was considered, adequate achievers were more internal than underachievers. When the scores made by boys and girls were considered separately, however, the girls in Group A were revealed to be significantly more internal than girls in Group B, but this was not true of the boys. No significant difference was found in internal orientation between boys in Group A and boys in Group B, as this variable was measured by the Battle I-E. As was noted earlier, while adequately achieving and underachieving boys are probably differientially rewarded for academic achievement, this is not true of more general situations in which this group of socio-disadvantaged boys are involved outside the classroom. Basically the culture is the same for both Group A boys and Group B boys.

It might be noted that when sex differences were analyzed, underachieving boys are found to be more internal than underachieving girls in more general situations, (as measured by the Battle I-E). This finding again seems to be related to the fact that the general cultural expectations for boys are different from the general cultural expectations for girls. (Warner, 1949; Winterbottom, 1958; Ausubel, 1963).

Thus, in "real life" situations boys are expected to take more responsibility in directing their own lives; in planning future goals and in peer group relationships. Thus they tend to develop in the direction of internal orientation in such conditions more readily than do girls. Girls exist in a more protected environment; and are more often found in situations in which planning and direction are provided for them. There appears to be less difference between the educational and the general life situation for girls than there is for boys.

As predicted, Adequate Achievers were rated significantly higher than Underachievers by teachers in classroom behaviors and attitudes and personality characteristics in all conditions. Group A's higher evaluations on this variable may be directly related to apparent desire for approval from teachers, parents and from significant others, and/or to their tendency to show greater initiative in seeking intellectual rewards. Since the more internal subject does not feel that his goals will be handed to him, it should be expected that he would display greater effort and persistence in trying to acquire intellectual-academic objectives. This more intensive interest in academic success tends to result in a greater acquisition of concepts and skills which is often subsequently reflected in higher performance scores and teacher evaluations. Studies indicate, (Cronbach, 1960; Crandall, 1963; McGhee, 1968) That teachers' grades and ratings are often dependent as much, if not more, on the way the teacher perceives the student's approach behavior in the above areas, as they are on the student's actual knowledge and skill. Behaviors such as cooperation, persistence, active, positive participation in classroom activities, and attention, may be intricately involved, intentionally or unintentionally, in the criteria for teachers' evaluations.

When boys in both groups were compared with girls in both groups, girls, even in Group B, were rated significantly higher in classroom behavior and personality characteristics than were boys. It seems probable that girls have been differentially treated for conforming, cooperative, compliant behavior; and rewarded positively, more often for "lady-like" behavior. Boys are probably more independent and less conforming in the classroom, and have been rewarded, positively, more often for such "man-like" behavior.

Girls in general may have more need to use teacher reactions and the reactions of other significant adults to define the competence of their efforts than did the boys. Thus girls' classroom behaviors may be more uniform, regardless of achievement, and consequently less related to the I-E control variable than boys.

As expected from the previous findings on teacher ratings, when deviant behavior was analyzed, it was found that as a total group, Adequate Achievers tended to display less deviant behavior than did Underachievers. When intragroup data were inspected separately, significant differences were found only within the underachieving group where more external subjects for control of positive reinforcement were rated as manifesting significantly more acting-out behavior than those subjects who were more internal for control of positive reinforcement. In like manner, a trend was revealed for subjects who were more external for control of negative reinforcement to also be rated as displaying more deviant behavior.

Thus deviant behavior, for the subjects in this study seems to be related to both achievement and to the degree of control over both negative and positive reinforcement which a subject experiences. Poor achievers tend to display more acting-out behavior when they do not feel that they are in control of positive and/or negative reinforcements. They also tend to place responsibility, for both successes and failures on persons and conditions outside themselves. Lower deviant behavior scores are obtained for the adequate achievers who also tend to be more internal; i.e., to perceive control over their own successes and failures. The implications of the present findings are clearly relevant to certain broad theoretical considerations relating to deviant behavior.

Merton (1958) argues for the homogeneity of the American culture, largely resulting from complex mass communication media and vast public educational systems. Although the American society is differentiated and stratified, he asserts that certain cultural emphasis or goals are pervasive throughout the country. For exampl , nearly all Americans are enjoined to strive for achievement or success in both material and personal areas.

However, whithin the larger structure, Merton distinguishes as the two major aspects of a social system the organized set of normative values (cultural structure), and the institutionalized channels of access for attaining these values by legitimate means (social structure). These two elements are considered to vary independently of each other. Although there is pervasive awareness of the goals and values of the dominant society, the availability of legitimate means to obtain these goals are not uniformly distributed, i.e., the institutionalized channels of access to the recognized cultural goals are not available to some members of the society, notably the Afro-Americans, the subjects of the present study. Merton views deviant behavior as a consequence of the disparity between culturally emphasized values and socially restricted access to legitimate means of attaining these values. This socially - induced phenomenon is thus viewed as responsible for the higher rates of deviance in the socio-economically disadvantaged group.

Seeman (1959) also believes that subjects who feel alienated from the main stream of society and feel powerless to control the occurrence of the outcome or reinforcement he seeks, will have a higher expectancy that socially unapproved behaviors are required to achieve his goals. Jessor, et al (1968) asserts that "deviance and conformity represent the outcome of multiple influences and determinants in both the person and his situation," postulating that limited access in the opportunity structure, anomie, and access to illegitimate means should all tend to vary together. Their findings indicated that deviant behavior is selected from among possible adaptive alternatives when other (conforming) alternative behavior seems to offer few success experiences.

Parallel to Merton's social structure explanations, Jessor (1962, 1968) theorized that when personal didjunctions (i.e., highly valued goals and low expectations of attaining them) pervade numerous life-areas, there obtains a condition denoting intrapersonal strain. Often the subject caught in such a situation will adopt alternative behaviors, which are often socially unapproved, but which have a higher likelihood of leading to satisfaction. This particular formulation is most critical where expectations of attainment in a variety of areas of life are generally low, (what Rotter (1960) terms low freedom of movement).

Since adequate achievers are reinforced for socially conforming behavior by occupying a more favorable position in the academic achievement situation, they tend not to find reinforcing the manifestations of deviant behavior. On the otherhand, underachievers, who have fewer success experiences, are, theoretically in a position more conducive to the production of deviant behavior. Thus in the present study pressures to adopt deviant alternatives to attain their goals are highest in the underachievers group, and controls against deviance are lowest.

It is possible to view (as does Jessor) deviant behavior as goal directed behavior which occurs despite the probability of negative personal and social consequences. According to Jessor, such behavior is contingent upon the fact that, for some socially disadvantaged children conforming behavior is often unsuccessful in achieving academic goals. Findings reported here suggest that such might be the case for the underachieving subjects in this study.

Some attempt was made in the present study to relate achievement and internal-external control of reinforcement to parental variables. On the Fels Research Institute Parent Reaction Questionnaire, no significant differences were found between the mothers of adequate achievers and underachievers when the total number of positive and negative responses were compared. However, when the total number of all responses, including positive, negative and neutral, given as first, second, or additional reactions (to their children's abilities, interests and performances in the intellectual area) were compared, significant differences between the mothers of the two groups were revealed. The mothers of adequate achievers gave significantly more total responses than did the mothers of underachievers. When the differences between the two sexes were considered, the mothers of girls were found to be significantly more responsive than the mothers of boys. In this particular socio-economic group, parental attitudes and behaviors may have less impact upon, and therefore be less predictive of, the academic performance and the internal-external control orientation of boys.

The more intensive total responsibility manifested by the mothers of all adequate achievers as compared with underachievers; and by the mothers of girls as compared with boys, may indicate more total concern to provide data in a situation such as this one; more information about the child; and/or more interest in the child. Contrarily, the above data might suggest that the mothers of underachievers and the mothers of boys, generally, tend to be either less interested and concerned about their children or tend to have less information about their children. Further research will have to be undertaken in order to test the above conclusions suggested by the data, as well as their possible dynamic implications.

The finding in the study that mothers of underachievers gave significantly more negative responses as first reactions than did mothers of adequate achievers might be considered as evidence that the mothers of low achievers are more critical of their children in situations related to intellectual achievement and academic activities. Such criticalness may be in reaction to their children's lack of achievement in these areas; or it could serve as a factor in their children's lack of achievement. The parent might be responding to a realistic appraisal of her child's progress in school; and/or by so responding might elicit behavior on the part of her child that includes or leads to poor progress in intellectual or achievement areas.

In this connection, Chance (1965); and Katkovsky, Crandall and Good (1967), found that the parent who maintains a supportive positive relationship with his child is more likely to foster his child's belief in internal control than is the parent whose relationship with his child punitive, rejecting, and critical. The correlations between parents protectiveness, affectionateness, and nurturance, were somewhat higher (in the study cited above) with I- scores than they were with I+ scores. Katkovsky (1967) concluded that it seemed to be necessary for the child to have been provided by the parent with feelings of security, through loving, non-threatening behavior in order to internalize the responsibility for the negative reinforcements he receives.

Results from this investigation indicate that all the mothers were quite accurate in rating their child's competence in the intellectual area. Mothers' ratings were highly realistic in that their stated ratings of competence and the child's actual intellectual ability were congruent. The mothers of children who were achieving adequately in school rated their children in light of their actual accomplishments, while parents of underachievers rated their children as having less intellectual fitness for school work.

Mothers of adequate achievers were also significantly more satisfied with their children's progress in school than were mothers of underachievers, a finding that relates to the previous finding of the reactions by the mothers. The finding that mothers of the adequate achievers could give reliable ratings concerning their children's competence, and indicated greater feelings of satisfaction concerning their children's success does not, however, constitute a statement of a relationship involving antecedents of their children's more competent behavior. Because the parent states that her child is more competent does not necessarily indicate a cause and effect relationship.

The data in this study indicate that the mothers, irrespective of their background or social status and of the educational achievement of their children seem to set high value upon education and the necessity of hard work and conscientious effort in order to reach academic goals, as this information is obtained from rating scales. This is consistent with earlier findings by Merton (1958), Maccoby (1958), Cohen (1958), Sykes (1957) to the effect that most Americans, regardless of social class tend to strive for monetary and personal achievement;

and that all classes of people are not immune or indifferent to the expectations of "respectable" society. The mothers of Adequate Achievers and the mothers of Underachievers did not differ markedly in the minimal standards they held for their children's academic achievement, nor in the degree of importance or attainment value that they held for their children obtaining high educational achievement levels. That is, both sets of parents seemed to feel that it was equally important that they set high educational goals for their children, and that their children should strive diligently to attain these goals.

In an attempt to ascertain whether or not both groups of parents had equal influence over their children's achievement motivations and behaviors through their own attitudes and behaviors, a personal interview was held with each mother. It was also felt that the structured interview would help determine whether or not the actual attitudes and behaviors of the mothers were accurately reflected in the ratings given by them in the various areas.

Findings revealed few significant differences between the mothers of underachievers and the mothers of adequate achievers in the responses given in the interview situations. While the mothers of girls tended to hold higher minimal standards and expectancy values, and to be more satisfied with evidence of achievement than were the mothers of boys; and the mothers of adequate achievers appeared to be more satisfied with academic achievement levels than were the mothers of underachievers; few other differences were obtained. In all other areas the mothers of all of the subjects in this socio-academic group appeared to give relatively the same types of answers to questions posed to them in the interview setting. Either these parents are in fact not different in their attitudes toward their children's academic-intellectual accomplishments; might be less willing to give honest answers concerning these differences in an interview situation; and/or interview responses might not be significantly related to internality-externality. In future research, an attempt might be made to ascertain actual differences in child rearing practices relating to positive and negative reinforcement and to achievement motivation, rather than differences in responses concerning these areas.

Relatively little work has been done on antecedents for developing attitudes of internal versus external control of reinforcements. In this study on the responses given by the mother was analyzed. Perhaps the father or father surrogate plays as significant or more significant role in determining internality-externality. In future research the attitude of the fathers toward their children's intellectual-academic achievement should be determined.

The consistent indication that lower socio-economic level groups are more external may imply that direct cultural teaching of internal-external attitudes occur (Phares, 1965; Phares, 1968; Graves and Katkovsky, 1964). It is inferred that some of the parents of this socioeconomically disadvantaged group of children intentionally or inadvertantly encourage external thinking in order to provide their children with a "cushion" to defend themselves against perceived limited opportunities and abilities for success. The direct teaching concerning causation by the parent possibly follows closely the model which the parent presents to the child concerning his own external vs. internal orientation. Further investigation will determine the relationship between such antecedents and the internal versus external control of reinforcements personality construct.

CHAPTER V

USE TO BE MADE OF FINDINGS

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The purpose of this investigation was to study the socio-economically disadvantaged child and his level of school achievement, as related to the internal versus external control of positive and negative reinforcements, personality constructs, classroom behavior, and parental attitudes concerning classroom behavior and school achievement. Although many socially and economically disadvantaged children tend to score below average on achievement tests, there are many children who are classified as socially and economically disadvantaged who score within the normal range or above, on such tests. In this study an attempt was made to determine some of the variables that would account for a better understanding of the "adequate achiever" in this low income group.

Since some of the variables employed in the present study were found to be relevant to the development of the "adequate achiever" in the socio-economically disadvantaged group, educators and psychologists should study the possibilities of using such knowledge to provide more effective training and specifically directed motivational efforts for the disadvantaged child who has not been successful in using his intellectual potential and his general capacities for academic advancement as well as general movement toward over-all social and economic adequacy.

Special efforts should be instigated to suit the styles and needs of both the internally oriented and the externally oriented child. The teacher should be motivated to develop techniques for teaching, training, and rewarding differentially those students who assign responsibility for intellectual failures and/or successes to himself or to others. Thus a study of the possible interrelationships involving deviant classroom behavior, lack of interest and motivation for adequate achievement in subject areas, and parental attitudes concerning classroom behavior and school achievement might enable children of low socio-economic backgrounds to be educated more successfully.

It is the responsibility of the public school system to meet this challenge systematically and adequatelly and to provide more effective schooling, training, and environmental circumstances for the socially disadvantaged child. The results of such a study as the one undertaken should serve to encourage and guide educators in preparing curricula, and in developing approaches and techniques appropriate for the various cognitive styles and attitudes found among public school children.

REFERENCES

Ausubel, D. P. 1963, Teaching Strategy for Culturally deprived pupils: Cognitive and motivational considerations. School Review, 71, 454-463.

Battle, Esther S. 1965 Motivational determinants of academic task persistence · J. of Personality and Social Psychology, 2, 209-218.

Battle, Esther and Rotter J. 1963, Childrens' feelings of personal of personal control as related to social class and ethnic group. J. Personality, 31, 482-490.

Bernstein, B. 1961, Social class and linguistic development: A theory of social learning. Education, Economy, and Society. Illinois: Free Press of Glencoe.

Bialer, Irving 1961 Conceptualization of success and failure in mentally retarded and normal children. J. Personality 29, 303-320.

Blackman, S. Some factors affecting the perception of events as chance determined. J. of Psychology, 1962, 54, 197-202.

Butterfield, E. 1964, Locus of control, test anxiety, reactions to frustration and achievement attitudes. J. of Personality, 32, 355-370.

Cellura, A. R. 1963 Internality as a determinant of academic achievement in low SES adolescents. Unpublished manuscript, University of Rochester.

Chance, June E. 1965, Internal control of reinforcements and the school learning process. Paper read at Society for Research in Child Development Meeting Minneapolis, March, 1965.

Cohen, J. 1960 Chance, skill, and luck. Baltimore: Penguin Books.

Coleman, J. S. Campbell, E. Q. Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D, and York, R. L. Equality of educational opportunity, Report from Office of Education Washington, D.C.: U. S. Government Printing Office, 1966.

Cromwell, R. L. A Social Learning approach to mental retardation In N. L. Ellis, (Ed.), Handbook of mental deficiency New York: McGraw-Hill, 1963.

Cromwell, R. L., Rosenthal, D., Shankow, D., and Kahn, T. Reaction time, locus of control, choice behavior and descriptions of parental behavior in schizophrenic and normal subjects. J. Personality, 1961, 29, 363-380.

Crandall, Vaughn, J. Achievement, in H. Stevenson (Ed.) Child Psychology 62nd year National Soc. Stud. Education, Part 1 Chicago University of Chicago Press, 1963.

Crandall, V. J. Dewey, R., Katkovsky, W. and Preston, A. Parents' attitudes and behaviors and grade school children's academic achievements. J. of Genetic Psychology, 1964, 104, 53-66.

Crandall, V. J.; Preston, A.; and Robson, A. Maternal reactions and the development of independence and achievement behavior in young children. Child Development, 1960, 31, 243-249.

Crandall, V. J.; Katkovsky, W.; and Preston, A. Motivational and ability determinants of young children's intellectual achievement behaviors Child Development, 1962, 33, 643-661.

Crandall, Virginia C. The reinforcement effects of adult reactions and non-reactions on children's achievement expectations. Child Development, 1963, 34, 335-354.

Crandall, V. C.; Good, Suzanne; and Crandall, V. J. The reinforcement effects of adults' reactions and non-reactions on children's achievement expectations: a replication study. Child Development, 1964, 31, 520-541.

Crandall, V. C., Katkovsky, W., Crandall, V. J. Children's beliefs in their own control of reinforcements in intellectual-academic achievement situations. Child Development, 1965, 36, 91-109.

Cronbach, Lee J. Essentials of Psychological Testing, New York: Harper & Row, Publishers, 1960.

Efran, J. Some personality determinants of memory for success and failure. Unpublished doctoral dissertation, Ohio State University, 1963.

Feather, N. T. Valence of outcome and expectation to task difficulty and perceived locus of control, J. of Personality and Social Psychology, 1967, 7, 372-386.

Franklin, R. D. Youths' expectations about internal versus external control of reinforcement related to N variables Unpublished doctoral dissertation. Purdue University, 1963.

Gore, Mayo, and Rotter, J. A. Personality correlate of social action. J. Personality, 1963, 31, 58-64.

Graves, T. D. Time perspectiveand the deferred gratification pattern in a tri-ethnic community. Research Report No. 5, Tri-Ethnic Research Project University of Colorado, Institute of Behavioral Science, 1961.

Graves, Katkovsky, 1964.

Havighurst, E. J. Who are the disadvantaged? Education,1965, 85, 455-458.

Hersch, P. D. and Scheibe, K. B. Reliability and validity of internal-external control as a personality dimension. J. of Consulting Psychology, 1967, 31, 609-613.

Holden, K. B. and Rotter, J. B. A nonverbal measure of extinction in skill and chance situations. J. of Experimental Psychology, 1962, 63, 519-520.

Iowa Tests of Basic Skills; E. F. Lindquist and A. N. Hieronymus Houghton Mifflin, 1940, 1956.

James, W. Internal versus external control of reinforcements as a basic variable in learning theory. Unpublished doctoral dissertation, Ohio State University, 1957.

James, W. H. and Rotter, J. B Partial and 100 percent reinforcement under chance and skill conditions. J. Experimental Psychology, 1958, 55, 387-403.

James, W. H., Woodruff, A. B., and Werner, W. Effect of internal and external control upon smoking behavior. J. of Consulting Psychology, 1965, 29, 184-186.

Jessor, et. al. 1967.

Jessor, Richard; Graves, T. D.; Hanson, R. C.; Jessor, S. L. Society, Personality and Deviant Behavior, A Study of a Tri-Ethnic Community. Holt, Rhinehart, and Winston, Inc. 1968.

Julian, J. W., and Katz, S. B. Internal versus external control and the value of reinforcement. J. of Personality and Social Psychology, 1968, 8, 89-94.

Katkovsky, W.; Crandall, V.and Goode, S. Parental antecedents of children's beliefs in internal-external control of reinforcements in intellectual achievement situations. Child Development, 1967, 38, 765-776.

Katkovsky, W.; Preston, A; Vaugh, J. Parents' attitudes toward their personal achievements and toward the achievement behaviors of their children. *J. of Genetic Psychology*, 1964, *104*, 67-82.

Katkovsky, W; Preston, A.; Vaugh, J. Parents achievement attitudes and their behavior with their children in achievement situations. *J. of Genetic Psychology*. 1964, *104*, 105-121.

Lefcourt, H. M. Internal versus external control of reinforcement: a review. *Psychological Bulletin*, 1966, *65*, 206-220.

Lefcourt, H. M., and Ladwig, G. W. The American Negro: a problem in expectancies. *J. of Personality and Social Psychology*, 1965, *1*, 377-380.

Lefcourt, H. M.; and Ladwig, G. W. The effect of reference group upon Negroes task persistence in a bi-racial competitive game. *J. of personality and Social Psychology*. 1965, *1*, 668-671.

Lipp, L.; Kolstoe, R.; Randall, H. Denial of disability and internal control of reinforcement: A study utilizing a perceptual defense paradigm. Paper presented at the meeting of Midwestern Psychological Association, Chicago, 1967,

Lipp, L; Kolstoe, R.; James, W.; and Randall, H. Denial of disability and internal control of reinforcement: A study using a perceptual defense paradigm. *J. of Consulting and Clinical Psychology*, 1968, *32*, 72-75.

Liverant, S., and Scodel, A. Internal and external control as determinants of decision making under conditions of risk. *Psychological Reports*, 1960, *7*, 59-67.

Lorge-Thorndike Intelligence Test, (Level 4); Irving Lorge and Robert L. Thorndike; Houghton Mifflin Co., 1954.

Maccoby, Eleanor E., Johnson, J. P.; & Church, R. M. Community integration and the social control of juvenile delinquency. *Journal of Social Issues*, 1958, *14*, 38-51.

McGhee, Paul E., and Crandall, V. C. Beliefs in internal-external control of reinforcements and academic performance. *Child Development*, 1968, *39*, 91-102.

Merton, R. K. Social Theory and Social Structure, Glencoe: The Free Press, 1958.

Phares, E. J. Expectancy changes in skill and chance situations. *J. of Abnormal and Social Psychology*, 1957, *54*, 339-342.

Phares, E. J. Perceptual threshold decrements as a function of skill and chance expectancies. *J. of Psychology*, 1962, *53*, 339-342.

Phares, E. J. Internal-external control as a determinant of amount of social influence exerted. *J. of Personality and Social Psychology*, 1965, *2*, 642-647.

Phares, E. J.; Ritchie, D. E.; Davis, Wm. L. Internal-external control and reaction to threat. *J. of Personality and Social Psychology*, 1968, *4*, 402-405.

Riessman, Frank, *The Culturally Deprived Child*. New York: Harper and Row, Publishers, 1962.

Rotter, J. B. *Social Learning and Clinical Psychology*. Englewood Cliffs, New Jersey: Prentice-Hall, 1954.

Rotter, J. B. Some implications of a social learning theory for the prediction of goal directed behavior from testing procedures. *Psychological Review*, 60-67; 1960.

Rotter, J. B. Generalized expectancies of internal versus external control of reinforcement. *Psychol. Monog.* 1966, *80*, No. 609.

Rotter, J. B.; Liverant, S. and Crowne, D. P. The growth and extinction of expectancies in chances and skilled tests: *J. of Psychology*, 1961, *52*, 161-177.

Rotter, J. B.; and Mulry, R. Internal versus external control of reinforcement and decision time. *J. of Personality and Social Psychology*, 1965, *2*, 598-604.

Seeman, M. On the meaning of alienation. *American Sociological Review*, 1959, *24*, 782-791.

Seeman, M. Alienation and social learning in a reformatory. *American J. Of Sociology*, 1963, *69*, 270-284.

Seeman, M., and Evans, J. W. Alienation and learning in a hospital setting. *American Sociological Review*, 1962, *27*, 772-783.

Strickland, B. The prediction of social action from a dimension of internal-external control. *J. of Social Psychology*, 1965, *66*, 353-358.

Sykes, G. M., Matza, D. Techniques of neutralization. *American Sociological Review*, 1957, *22*, 664-670.

Tolor, A., and Jalowiec, J. E. Body boundry, parental attitudes, and internal-external expectancy. J. of Consulting and Clinical Psychology, 1968, 32, 206-209.

Tolor, A., and Reznikoff, M. Relation between insight, repression-sensitization, internal-external control and death anxiety. J. of Abnormal Pshch., 1967, 72, 426-430.

Walter, J. and Connor, R. Interaction of mothers and children from lower class families. Child Development, 1964, 35,

Walters, E. and Crandall, V. J. Social class and observed maternal behavior from 1940 to 1960. Child Development, 1964, 35, 1021-1032.

Warner, W. L., et al. Social Class in America. Chicago: Science Research Associates, 1949.

Watson, D. Relationship between locus of control and anxiety. J. of Personality and Social Psych., 1967, 6, 91-92.

Watson, D., and Baumal, E. Effects of locus of control and expectation of future control upon present performance. J. of Personality and Social Psychology, 1967, 6, 212-215.

Winterbottom, M. The relation of need for achievement in learning experiences in independence and mastery. In J. W. Atkinson (Ed.), Motives in Fantasy, Action and Society. New York: Van Nostrand, 1958.

APPENDIX I

DATA

DATA

RAW SCORES ON PREDICTOR VARIABLES

(Parent Variables)

Girls - Track 1 - Both Parentsin Home

No.	No.	MS	Comp.	AV	Satisf.	PR	NR	TR^A	$\overline{\text{MTR}}^B$	1stPR	1stNR
1.	127	7	7	6	8	20	4	24	30	5	2
2.	130	4	6	6	8	11	12	23	25	4	5
3.	135	4	6	6	6	13	19	32	23	5	7
4.	148	4	6	5	6	12	12	24	12	6	6
5.	157	6	6	5	6	16	20	36	31	6	6
6.	160	6	6	5	6	18	16	34	22	4	8
7.	169	8	8	5	4	14	24	38	33	5	8
8.	167	1	6	5	6	13	20	33	28	4	7
9.	174	4	5	5	6	19	18	37	32	7	5
10.	186	4	6	5	6	13	29	42	38	1	10
11.	190	4	6	5	6	9	8	17	19	3	2
12.	102	3	5	6	8	13	11	24	24	4	4
Girls - Track 1 - Mother Only in Home											
13.	111	7	7	6	8	15	14	29	28	1	6
14.	123	5	6	5	4	11	18	29	27	1	8
15.	103	6	7	6	7	11	14	25	15	4	7
16.	223	4	6	5	6	22	14	36	36	8	4
17.	139	4	5	6	6	16	17	33	33	6	5
18.	144	3	6	5	7	19	22	41	36	7	7
19.	185	3	5	5	6	16	20	36	36	4	8
20.	163	1	6	5	8	14	22	36	29	5	7
21.	213	5	8	6	6	13	21	34	27	5	7
22.	205	4	7	6	8	24	23	47	39	8	8
23.	215	8	5	6	7	16	20	36	27	6	6
24.	214	1	6	1	6	14	20	34	22	2	10
25.	234	4	5	6	8	16	20	36	27	6	6

DATA
RAW SCORES ON PREDICTOR VARIABLES
(Parent Variables)

Girls - Track 3 - Both Parents in Home

No.	No.	MS	Comp.	AV	Satisf.	PR	NR	TR^A	MTR^B	1stPR	1stNR
26.	105	5	5	6	6	13	22	35	34	5	7
27.	152	3	4	2	2	6	19	25	24	4	5
28.	162	5	6	6	5	19	17	36	36	6	6
29.	164	5	5	5	7	4	22	26	22	1	8
30.	165	8	6	6	6	2	33	35	35	0	11
31.	172	5	5	5	5	5	8	13	19	0	2
32.	237	5	6	7	6	11	17	28	20	4	6
33.	188	8	8	5	7	26	29	55	36	10	7
34.	133	3	5	5	6	16	19	35	30	6	7
35.	232	4	6	5	5	7	27	34	31	2	9
36.	224	8	8	5	7	17	18	35	24	5	7
37.	229	6	6	6	6	14	14	28	14	7	7

Girls - Track 3 - Mother Only in Home

No.	No.	MS	Comp.	AV	Satisf.	PR	NR	TR^A	MTR^B	1stPR	1stNR
38.	109	4	6	6	5	8	16	24	12	4	8
39.	131	2	6	5	6	7	15	22	11	5	7
40.	192	4	6	5	6	15	19	34	25	6	6
41.	147	5	5	5	5	14	18	32	24	5	5
42.	145	4	8	5	5	4	20	24	12	2	10
43.	149	6	8	6	8	18	18	36	24	5	7
44.	206	2	5	6	7	21	15	36	36	7	5
45.	159	4	4	5	4	3	38	41	26	1	10
46.	209	4	5	5	5	20	17	37	36	8	4
47.	218	1	5	6	7	8	16	24	12	4	8
48.	222	1	7	6	8	20	15	35	37	7	5
49.	240	6	6	5	6	14	21	35	29	5	7
50.	238	5	6	6	1	8	24	32	25	4	7

DATA
RAW SCORES ON PREDICTOR VARIABLES

(Parent Variables)

Boys - Track 1 - Both Parents in Home

No.	No.	MS	Comp.	AV	Satisf.	PR	NR	TR^A	MTR^B	1stPR	1stNR
51.	180	8	5	6	8	7	6	13	7	3	3
52.	113	4	8	5	8	14	22	36	24	5	7
53.	126	5	7	6	7	12	14	26	28	8	4
54.	154	4	3	5	4	11	21	32	28	4	7
55.	136	5	6	5	7	10	19	29	20	4	7
56.	138	5	6	6	6	18	8	26	15	8	4
57.	143	4	6	6	6	10	20	30	20	4	7
58.	140	4	6	6	7	14	23	37	24	4	8
59.	191	6	6	6	6	13	23	36	33	5	7
60.	166	3	5	4	3	7	20	27	36	3	6
61.	220	6	4	4	7	12	16	28	29	3	6
62.	201	4	8	6	7	13	22	35	24	5	7

Boys - Track 1 - Mother Only in Home

No.	No.	MS	Comp.	AV	Satisf.	PR	NR	TR^A	MTR^B	1stPR	1stNR
63.	101	4	4	7	4	15	21	36	26	5	7
64.	110	6	7	5	7	17	19	36	33	6	7
65.	112	4	8	6	6	10	12	22	16	4	4
66.	117	5	7	5	5	10	22	32	28	4	7
67.	118	7	7	6	4	10	28	38	36	4	9
68.	121	6	6	5	8	11	21	32	34	3	8
69.	231	6	6	6	6	8	14	22	12	4	7
70.	171	5	5	5	4	15	21	36	26	3	4
71.	219	6	6	5	7	10	8	18	12	5	4
72.	184	4	5	6	8	10	16	26	24	3	5
73.	197	3	5	6	5	10	23	33	26	4	7
74.	208	5	6	5	8	21	18	39	25	8	7
75.	181	6	6	6	6	14	18	32	26	5	6

DATA
RAW SCORES ON PREDICTOR VARIABLES
(Parent Variables)

Boys - Track 3 - Both Parents in Home

No.	No.	MS	Comp.	AV	Satisf.	PR	NR	TR^A	MTR^B	$1^{st}PR$	$1^{st}NR$
76.	210	3	3	6	5	8	13	21	11	4	6
77.	207	6	6	5	6	8	22	30	17	3	10
78.	216	4	7	6	6	18	22	40	31	6	8
79.	225	3	8	5	6	16	8	24	12	8	4
80.	122	1	5	5	5	10	14	24	14	5	6
81.	182	5	5	6	4	8	13	21	11	2	5
82.	230	5	5	6	5	14	10	24	12	7	5
83.	203	4	5	6	6	21	18	39	34	8	6
84.	150	4	3	6	4	13	14	27	19	4	6
85.	125	1	4	4	2	13	23	36	30	5	8
86.	227	4	8	4	4	0	24	24	12	0	12
87.	142	5	5	6	4	12	20	32	29	4	7
Boys - Track 3 - Mother Only in Home											
88.	155	4	8	7	8	2	10	12	12	1	5
89.	151	4	4	5	2	11	25	36	32	3	9
90.	116	6	6	6	5	13	21	34	22	6	10
91.	173	4	4	5	6	12	12	24	12	6	6
92.	108	2	4	6	4	14	22	36	24	5	7
93.	153	1	5	5	6	6	18	24	12	3	9
94.	161	4	6	6	4	11	25	36	24	5	9
95.	217	5	7	5	7	10	18	28	16	5	9
96.	195	6	5	5	7	21	13	34	40	7	5
97.	178	6	6	6	8	20	14	34	45	7	4
98.	141	4	5	6	5	19	17	36	34	7	5
99.	128	2	6	5	6	3	29	32	21	1	11
100.	177	1	6	6	6	15	18	33	24	5	6

DATA
RAW SCORES ON PREDICTOR VARIABLES
Girls - Track 1 - Both Parents in Home

No.	Number Track 1	Battle I-E	IAR Total	IAR I^+	IAR I^-	TCPE	Deviant Behavior Score
1.	127	12	25	12	13	29	17
2.	130	12	29	14	15	35	21
3.	135	12	29	15	14	34	19
4.	148	11	29	14	15	33	19
5.	157	13	31	17	14	35	16
6.	160	12	26	13	13	31	15
7.	169	15	32	16	16	28	15
8.	167	12	29	13	16	29	14
9.	174	12	30	15	15	29	18
10.	186	16	30	15	15	28	16
11.	190	15	28	14	14	36	19
12.	102	15	29	14	15	36	19

Girls - Track 1 - Mother Only in Home

No.	Number Track 1	Battle I-E	IAR Total	IAR I^+	IAR I^-	TCPE	Deviant Behavior Score
13.	111	10	26	13	13	41	21
14.	123	15	29	13	16	32	18
15.	103	15	27	13	14	40	22
16.	223	16	27	13	14	40	18
17.	139	14	30	14	16	35	18
18.	144	10	28	14	14	32	18
19.	185	13	32	15	17	24	16
20.	163	19	26	13	13	37	19
21.	213	9	28	12	16	31	19
22.	205	21	29	15	14	31	14
23.	215	15	27	15	12	35	21
24.	214	21	30	13	17	33	19
25.	234	17	30	15	15	40	19

DATA
RAW SCORES ON PREDICTOR VARIABLES
Girls - Track 3 - Both Parents in Home

No.	Number	Battle I-E	IAR Total	IAR P^{+}	IAR I^{-}	TCPE	DBS
26.	105	22	20	8	12	24	10
27.	152	17	21	12	9	27	18
28.	162	18	23	10	13	25	15
29.	164	19	14	7	7	29	17
30.	165	16	17	8	9	28	18
31.	172	14	24	13	11	28	16
32.	237	15	20	8	12	30	15
33.	188	18	25	15	10	28	17
34.	133	25	22	13	9	20	16
35.	232	22	29	13	16	27	17
36.	224	16	27	13	14	33	19
37.	229	17	27	14	13	29	18

Girls - Track 3 - Mother Only in Home

No.	Number	Battle I-E	IAR Total	IAR P^{+}	IAR I^{-}	TCPE	DBS
38.	109	20	27	14	13	29	18
39.	131	20	31	15	16	30	17
40.	192	22	19	9	10	33	13
41.	147	21	22	11	11	30	16
42.	145	14	24	13	11	30	16
43.	149	19	24	13	11	30	19
44.	206	14	27	11	16	27	16
45.	159	20	23	11	12	23	14
46.	209	15	23	12	11	18	9
47.	218	25	26	14	12	18	11
48.	222	27	27	14	13	26	17
49.	240	19	19	10	9	35	22
50.	238	22	22	10	12	36	13

DATA
RAW SCORES ON PREDICTOR VARIABLES
Boys - Track 1 - Both Parents in Home

No.	Number	Battle I-E	IAR Total	IAR I^+	IAR I^-	TCPE	DBS
51.	180	18	26	13	13	40	17
52.	113	16	27	13	14	32	17
53.	126	22	24	13	11	36	16
54.	154	12	28	15	13	30	14
55.	136	19	25	14	11	38	20
56.	138	24	25	11	14	38	16
57.	143	10	28	14	14	29	15
58.	140	11	32	16	16	28	19
59.	191	15	32	16	16	41	18
60.	166	20	19	6	13	28	16
61.	220	15	24	14	10	29	16
62.	201	8	29	15	14	39	16

Boys - Track 1 - Mother Only in Home

No.	Number	Battle I-E	IAR Total	IAR I^+	IAR I^-	TCPE	DBS
63.	101	15	28	14	14	30	19
64.	110	15	27	13	14	32	15
65.	112	6	28	15	13	22	13
66.	117	20	25	12	13	34	17
67.	118	16	31	16	15	29	13
68.	121	20.	29	14	15	29	18
69.	231	19	25	14	11	39	17
70.	171	12	25	13	12	35	15
71.	219	15	30	16	14	27	16
72.	184	14	30	14	16	29	15
73.	197	19	30	15	15	30	18
74.	208	19	26	12	14	29	17
75.	181	13	27	14	13	23	16

DATA
RAW SCORES ON PREDICTOR VARIABLES

Boys - Track 3 - Both Parents in Home

No.	Number	Battle I-E	IAR Total	IAR I^+	IAR I^-	TCPE	DBS
76.	210	13	29	11	18	17	7
77.	207	21	21	11	10	25	17
78.	216	13	25	12	13	26	17
79.	225	15	24	11	13	25	14
80.	122	19	23	11	12	28	19
81.	182	12	26	14	12	19	9
82.	230	11	26	14	12	27	15
83.	203	13	19	9	10	26	18
84.	150	25	22	11	11	24	13
85.	125	19	20	12	8	29	15
86.	227	18	25	12	13	28	17
87.	142	16	24	12	12	33	16

Boys - Track 3 - Mothers only in Home

No.	Number	Battle I-E	IAR Total	IAR I^+	IAR I^-	TCPE	DBS
88.	155	12	29	14	15	22	9
89.	151	22	24	9	15	27	13
90.	116	13	23	12	11	22	12
91.	173	12	23	12	11	31	15
92.	108	17	17	8	9	22	14
93.	153	10	29	15	14	24	17
94.	161	10	27	11	16	32	18
95.	217	17	28	12	16	32	17
96.	195	20	26	13	13	23	18
97.	178	7	26	11	15	20	15
98.	141	10	27	15	12	19	15
99.	128	17	25	13	12	31	15
100.	177	14	27	15	12	20	9

Girls - Group A

Number	A-V	P-E	S-D	M-S	P-I	F-P-P
127	6	6	6	6	4	2
130	6	6	6	4	6	2
135	6	5	5	4	4	6
148	6	6	7	5	6	7
157	4	3	3	5	4	2
160	6	5	5	6	4	6
169	6	7	7	6	4	6
167	5	4	4	3	3	2
174	6	6	6	4	5	4
186	6	6	6	5	4	6
190	6	5	5	5	4	6
102	1	2	4	1	2	1
111	6	6	7	2	6	6
123	6	5	5	4	6	2
103	6	7	7	6	6	6
223	7	6	6	5	4	2
139	7	6	5	5	5	2
144	4	4	6	5	4	6
185	6	6	5	4	5	4
163	6	6	6	7	2	2
213	6	5	3	5	4	2
205	3	4	4	2	2	1
215	3	2	4	3	2	1
214	7	6	6	6	6	2
234	7	7	7	7	6	2

Girls - Group A

Number	I-P-P	F-P-P-R	I-PPR	F-NPR	INPR
127	2	6	7	2	2
130	2	4	4	2	2
135	6	6	6	2	2
148	6	6	6	2	2
157	2	2	4	4	4
160	6	4	6	4	4
169	6	6	4	4	4
167	2	3	2	2	2
174	4	4	4	6	6
186	6	4	4	4	4
190	6	4	6	4	4
102	1	2	2	2	2
111	6	7	2	2	2
123	2	6	6	6	2
103	6	6	6	2	2
223	2	4	2	2	2
139	2	4	4	4	4
144	6	6	6	4	4
185	4	4	4	4	4
163	2	3	2	1	1
213	2	4	4	4	6
205	1	2	2	2	2
215	1	2	2	2	2
214	2	4	4	4	4
234	2	4	4	2	2

Girls - Group B

Number	A-V	P-E	S-D	M-S	P-I	F-P-P
105	6	6	4	1	4	4
152	6	6	6	6	4	6
162	4	2	3	2	2	1
164	6	6	6	3	3	2
165	6	6	6	5	2	1
172	5	5	6	4	2	1
237	6	4	3	4	2	2
188	6	5	5	5	4	4
133	6	5	5	4	4	6
232	7	4	5	4	6	6
224	7	6	6	4	4	2
229	6	5	5	4	6	6
109	6	4	4	2	6	4
131	6	5	4	4	4	6
192	7	7	6	6	6	2
147	4	5	5	5	6	4
145	7	7	7	7	4	6
149	5	6	7	5	4	4
206	7	6	6	4	4	2
159	5	4	4	5	6	2
209	3	4	4	4	2	2
218	7	6	5	6	6	6
222	6	6	5	5	4	2
240	6	4	6	4	4	2
238	7	6	6	6	6	4

Girls - Group B

Number	I-P-P	F-P-P-R	I-P-P-R	F-NPR	I-NPR
105	4	6	6	4	4
152	6	6	6	4	4
162	1	2	3	1	1
164	1	3	3	2	1
165	3	2	3	1	2
172	2	2	2	1	2
237	2	2	2	4	4
188	4	4	4	4	4
133	6	6	6	2	2
232	6	6	6	4	4
224	2	4	4	2	2
229	4	6	6	4	6
109	4	4	4	4	4
131	4	6	6	4	4
192	2	4	4	4	6
147	6	4	4	4	4
145	6	6	6	2	2
149	4	6	4	4	4
206	2	4	4	2	2
159	2	2	2	4	7
209	2	2	2	2	2
218	6	6	6	4	4
222	2	4	4	4	4
240	2	6	6	4	4
238	4	0	4	2	2

Boys - Group A

Number	A-V	P-E	S-D	M-S	P-I	F-P-P
180	4	4	6	5	4	4
113	6	6	7	1	4	4
126	6	6	6	6	4	2
154	4	4	6	5	4	4
136	6	6	6	6	4	6
138	6	5	3	5	4	2
143	6	4	4	4	6	4
140	6	5	5	4	6	7
191	5	6	6	5	4	4
166	5	6	5	3	3	2
220	7	7	7	6	6	7
201	6	3	2	4	4	1
101	6	4	3	4	2	2
110	1	2	4	1	2	2
112	6	6	7	1	4	4
117	7	7	7	4	4	6
118	4	3	4	2	2	2
121	5	5	6	2	4	4
231	6	5	5	5	2	2
171	3	2	2	2	2	1
219	6	5	5	5	2	2
184	5	4	5	5	4	4
197	4	3	3	4	4	4
208	6	5	5	4	4	2
181	6	6	5	6	4	2

Boys - Group A

Number	I-P-P	F-PPR	I-PPR	F-NPR	I-NPR
180	4	4	4	4	4
113	6	7	4	4	4
126	2	6	7	2	2
154	4	4	4	4	2
136	6	6	6	2	2
138	2	4	4	4	6
143	6	4	4	2	4
140	6	6	6	2	2
191	2	4	4	4	6
166	3	3	2	2	1
220	7	6	6	4	4
201	1	4	2	4	4
101	2	4	4	4	4
110	4	2	2	2	2
112	6	7	2	2	2
117	6	6	6	2	2
118	2	4	4	4	4
121	4	6	4	2	2
231	2	4	2	4	4
171	1	1	1	2	2
219	2	4	4	2	4
184	4	4	4	4	4
197	4	4	6	6	6
208	2	4	2	2	4
181	2	4	4	4	4

Boys - Group B

Number	A-V	P-E	C-D	M-S	P-I	F-P-P
210	5	3	2	4	4	2
207	3	3	4	2	2	1
216	4	3	3	4	4	2
225	6	6	5	5	4	2
122	6	6	6	2	4	4
182	5	5	4	5	4	7
230	3	2	4	2	2	2
203	5	5	1	2	4	4
150	5	4	4	1	4	6
125	6	4	2	4	4	2
227	7	5	3	6	6	6
142	6	6	7	5	6	7
155	4	3	5	4	6	4
151	6	5	5	4	4	4
116	3	3	3	4	4	2
173	6	5	4	4	2	2
108	5	3	3	1	2	2
153	6	4	3	1	2	2
161	6	3	5	4	3	3
217	7	5	5	4	6	4
195	3	3	4	2	2	1
178	5	4	5	5	4	4
141	6	6	5	6	4	2
128	6	5	5	4	6	2
177	4	2	3	1	2	2

Boys - Group B

Number	I-P-P	F-PPR	I-PPR	F-NPR	I-NPR
210	2	2	2	4	4
207	1	2	2	2	2
216	2	2	2	4	4
225	2	4	4	4	4
122	4	6	4	2	2
182	7	4	4	4	4
230	2	2	2	2	2
203	2	4	4	6	6
150	4	4	4	4	4
125	2	6	6	6	6
227	6	4	4	4	6
142	6	6	6	2	2
155	6	6	4	4	4
151	2	6	4	4	4
116	2	2	2	4	4
173	2	3	3	2	2
108	2	2	4	4	4
153	2	4	4	4	4
161	2	2	3	1	1
217	4	4	2	4	6
195	1	2	2	2	2
178	4	4	4	4	4
141	2	4	4	4	4
128	2	6	6	4	4
177	2	4	4	4	4

Results

Inter-Rater Reliabilities for the Student Evaluation Form

Each student was rated by two teachers with whom he had close contacts in the past two years on classroom behavior attitudes and performance (Lincoln High School, Graphic Student Evaluation Summary, 1967). An index of behavior and attitudes was established by converting the combined totals from each of the two ratings into a single score. Calculations of inter-rater reliabilities found between the two teachers involved in each case are given in Table I.

TABLE 7

INTER-RATER RELIABILITIES FOR STUDENT EVALUATION FORM

School	Number of Students	[illegible]
A	26	.94
B	47	.93
C	43	.96
D	31	.88
E	91	.91
Total	244	

APPENDIX II

INSTRUMENTS USED

Dear Parent:

Your child has been selected to participate in a study of variables related to the ability of children to succeed in school.

All information collected in this research project will be considered strictly confidential, and will not affect your child's placement, nor his progress, in school. Names, responses and scores will not be used in any publications resulting from this study.

Your consent and cooperation will help us gather data that will contribute positively to the educational achievement of the children in our school system. Thank you for your help and consideration.

Please check one:

My child:

______ has

______ does not have

my permission to participate in this research project.

Parent's signature ______________

Child's name ____________________

CONFIDENTIAL INFORMATION

No. ____________________

Name ____

Address ______________________ Telephone no. ____________

Birthdate ______________________ Age ______________________
Month Day Year

Father's Name ________________ Living? ____ Dead? ______

Father's Occupation ______________________________________

Father's Address ____

Mother's Name ____

Address ____

Mother's Occupation ______________________________________

Guardian ____

Address ____

Guardian's Occupation ____________________________________

Number of brothers _______________________________________

Ages ____

Number of sisters ____

Ages ____

The IAR Questionnaire

Name ____________________

Grade ____________________

Birthdate ____________________

Sex (male or female)

GENERAL INSTRUCTIONS: This questionnaire describes a number of common experiences most of you have in your daily lives. These statements are presented one at a time, and following each are two possible answers. Read the description of the experience carefully, and then look at the two answers. Choose the one that most often describes what happens to you. Put an X in front of that answer. Be sure to answer each question according to how you really feel.

If, at any time, you are uncertain about the meaning of a question, raise your havd and one of the persons who passed out the questionnaires will come and explain it to you.

1. If a teacher passes you to the next grade, would it probably be
____a. because she liked you, or
____b. because of the work you did?

2. When you do well on a test at school, is it more likely to be
____a. because you studied for it, or
____b. because the test was especially easy?

3. When you have trouble understanding something in school, is it usually
____a. because the teacher didn't explain it clearly, or
____b. because you didn't listen carefully?

4. When you read a story and can't remember much of it, is it usually
____a. because the story wasn't well written, or
____b. because you weren't interested in the story?

5. Suppose your parents say you are doing well in school. Is this likely to happen
____a. because your school work is good, or
____b. because they are in a good mood?

6. Suppose you did better than usual in a subject at school. Would it probably happen
____a. because you tried harder, or
____b. because someone helped you?

7. When you lose at a game of cards or checkers, does it usually happen
____a. because the other player is good at the game, or
____b. because you don't play well?

8. Suppose a person doesn't think you are very bright or clever.
____a. Can you make him change his mind if you try to, or
____b. are there some people who will think you're not very bright no matter what you do?

9. If you solve a puzzle quickly, is it
____a. because it wasn't a very hard puzzle, or
____b. because you work on it carefully?

10. If a boy or girl tells you that you are dumb, is it more likely that they say that
____a. because they are mad at you, or
____b. because what you did really wasn't very bright.

11. Suppose you study to become a teacher, scientist or doctor and you fail. Do you think this would happen
____a. because you didn't work hard enough, or
____b. because you needed some help, and other people didn't give it to you?

12. When you learn something quickly in school, is it usually
____a. because you paid close attention, or
____b. because the teacher explained it clearly?

13. If a teacher says to you, "Your work is fine", is it
____a. because you did a good job, or
____b. something teachers usually say to encourage pupils?

14. When you find it hard to work arithmetic or math problems at school, is it
____a. because you didn't study well enough before you tried them, or
____b. because the teacher gave problems that were too hard?

15. When you forget something you heard in class, is it
____a. because the teacher didn't explain it very well, or
____b. because you didn't try very hard to remember?

16. Suppose you weren't sure about the answer to a question your teacher asked you but your answer turned out to be right. Is it likely to happen
____a. because she wasn't as particular as usual, or
____b. because you gave the best answer you could think of?

17. When you read a story and remember most of it, is it usually
____a. because you were interested in the story, or
____b. because the story was well-written?

18. If your parents tell you you're acting silly and not thinking clearly, is it more likely to be
____a. because of something you did, or
____b. because they happen to be feeling cranky?

19. When you don't do well on a test at school, is it
____a. because the test was especially hard, or
____b. because you didn't study for it?

20. When you win at a game of cards or checkers, does it happen
____a. because you play real well, or
____b. because the other person doesn't play well?

21. If people think you're bright or clever, is it
____a. because they happen to like you, or
____b. because you usually act that way?

22. If a teacher didn't pass you to the next grade, would it probably be
____a. because she "had it in for you", or
____b. because your school work wasn't good enough?

23. Suppose you don't do as well as usual in a subject at school. Would this probably happen
____a. because you weren't as careful as usual, or
____b. because somebody bothered you and kept you from working?

24. If a boy or girl tells you that you are bright, it is usually
____a. because you thought up a good idea, or
____b. because they like you?

25. Suppose you became a famous teacher, scientist or doctor. Do you think this would happen
____a. because other people helped you when you needed it, or
____b. because you worked very hard?

26. Suppose your parents say you aren't doing well in your school work. Is this likely to happen more
____a. because your work isn't very good, or
____b. because they are feeling cranky?

27. Suppose you are showing a friend how to play a game and he has trouble with it. Would that happen
____a. because he wasn't able to understand how to play, or
____b. because you couldn't explain it well?

28. When you find it easy to work arithmetic or math problems at school, is it usually
____a. because the teacher gave you especially easy problems, or
____b. because you studied your book well before you tried them?

29. When you remember something you heard in class, is it usually
____a. because you tried hard to remember, or
____b. because the teacher explained it well?

30. If you can't work a puzzle, is it more likely to happen
____a. because you are not especially good at working puzzles, or
____b. because the instructions weren't written clearly enough?

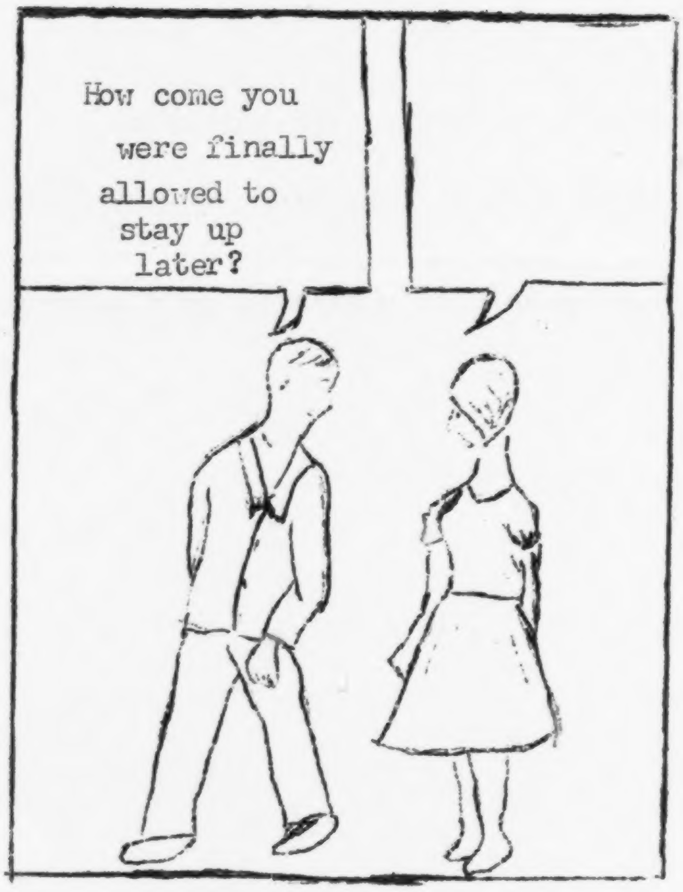
31. If your parents tell you that you are bright or clever, is it more likely
____a. because they are feeling good, or
____b. because of something you did?

32. Suppose you are explaining how to play a game to afriend and he learns quickly. Would that happen more often
____a. because you explained it well, or
____b. because he was able to understand it?

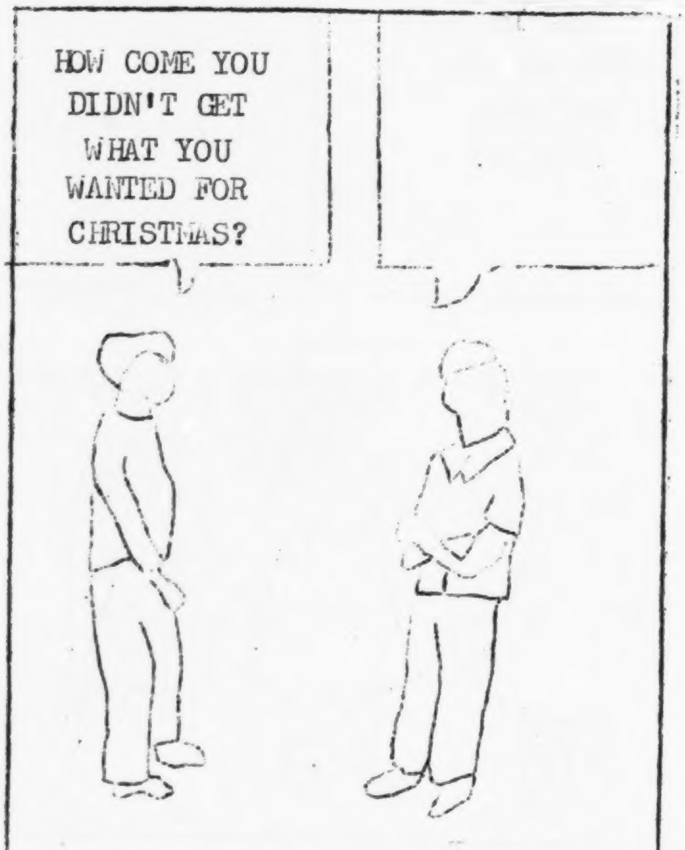
33. Suppose you're not sure about the answer to a question your teacher askes you and the answer you give turns out to be wrong. Is it likely to happen
____a. because she was more particular than usual, or
____b. because you answered too quickly?

34. If a teacher says to you, "Try to do better", would it be
____a. because this is something she might say to get pupils to try harder, or
____b. because your work wasn't as good as usual?

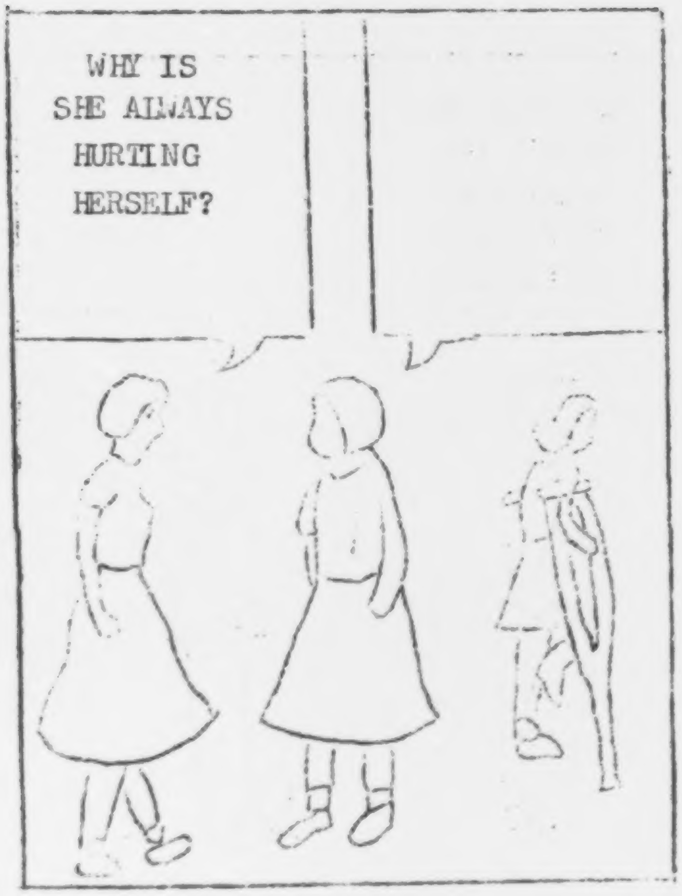
BATTLE'S CHILDREN'S PICTURE TEST OF
INTERNAL VERSUS EXTERNAL CONTROL
OF REINFORCEMENT


How come you were finally allowed to stay up later?

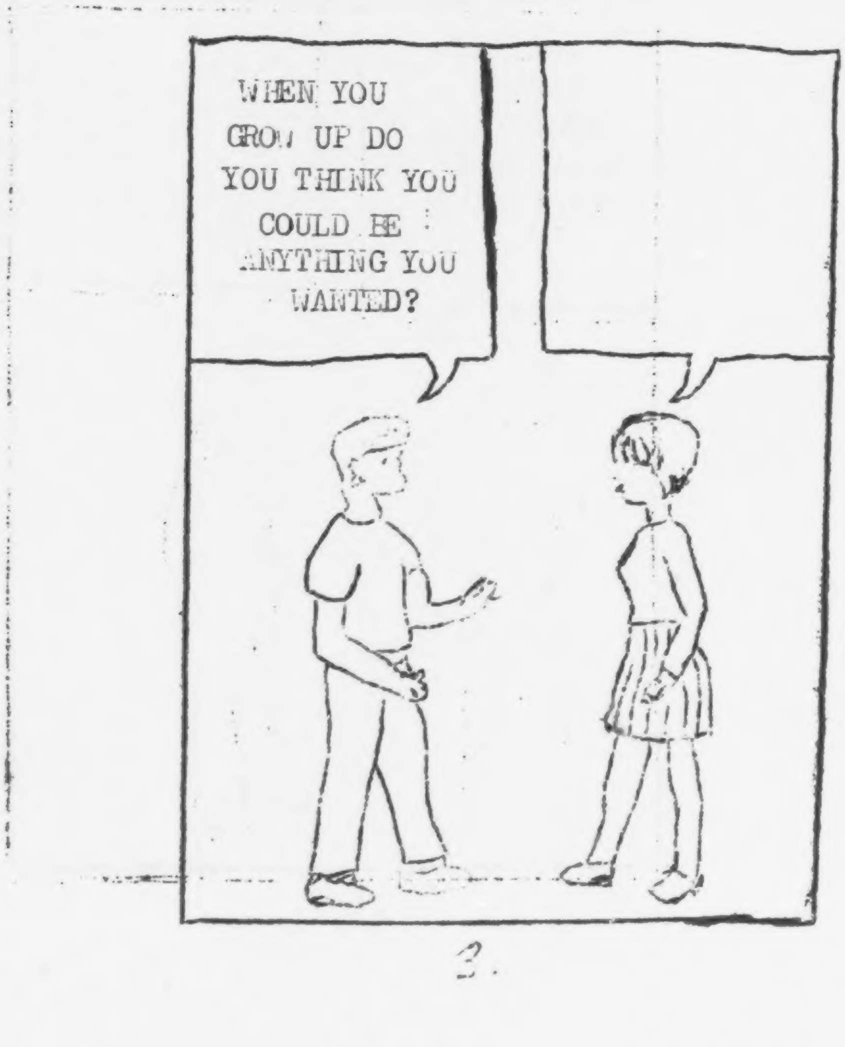
A


HOW COME YOU DIDN'T GET WHAT YOU WANTED FOR CHRISTMAS?

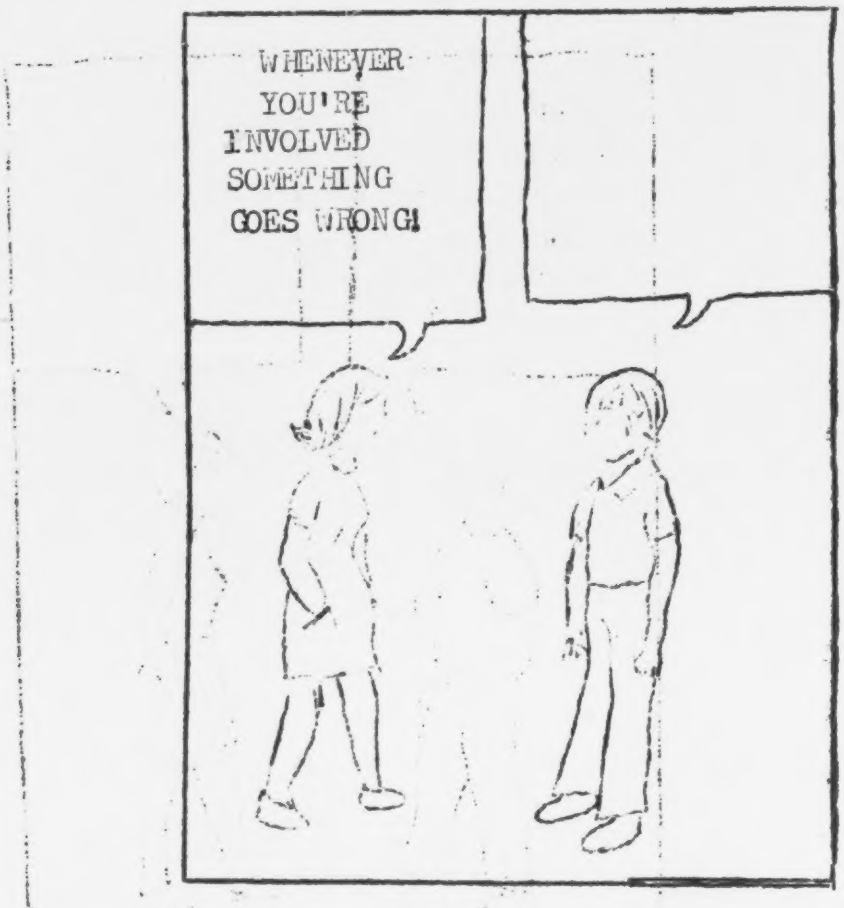
1


WHY IS SHE ALWAYS HURTING HERSELF?

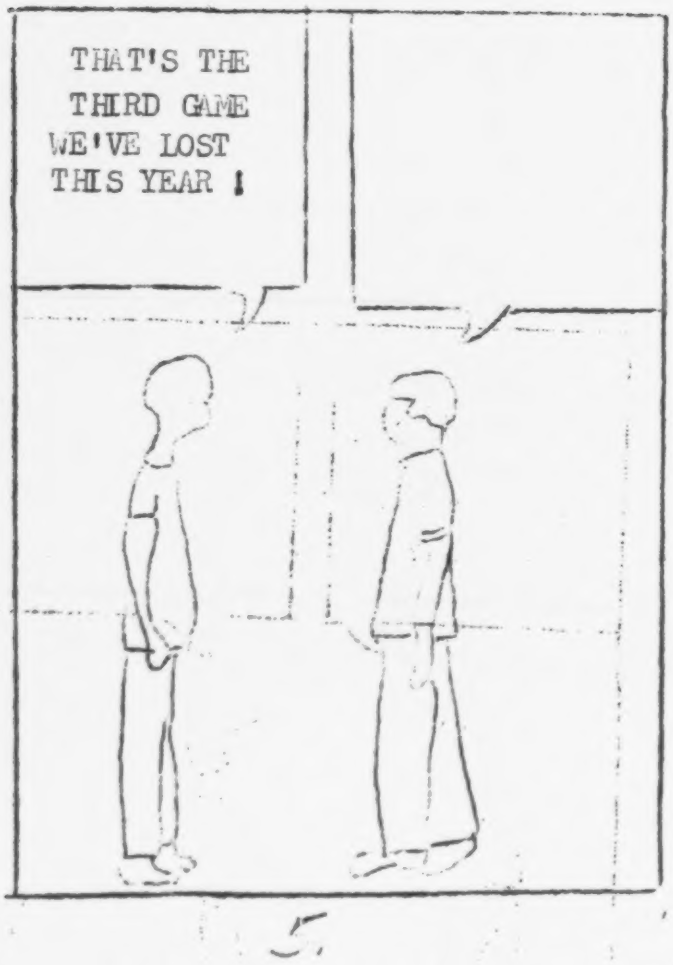
2.


WHEN YOU GROW UP DO YOU THINK YOU COULD BE ANYTHING YOU WANTED?

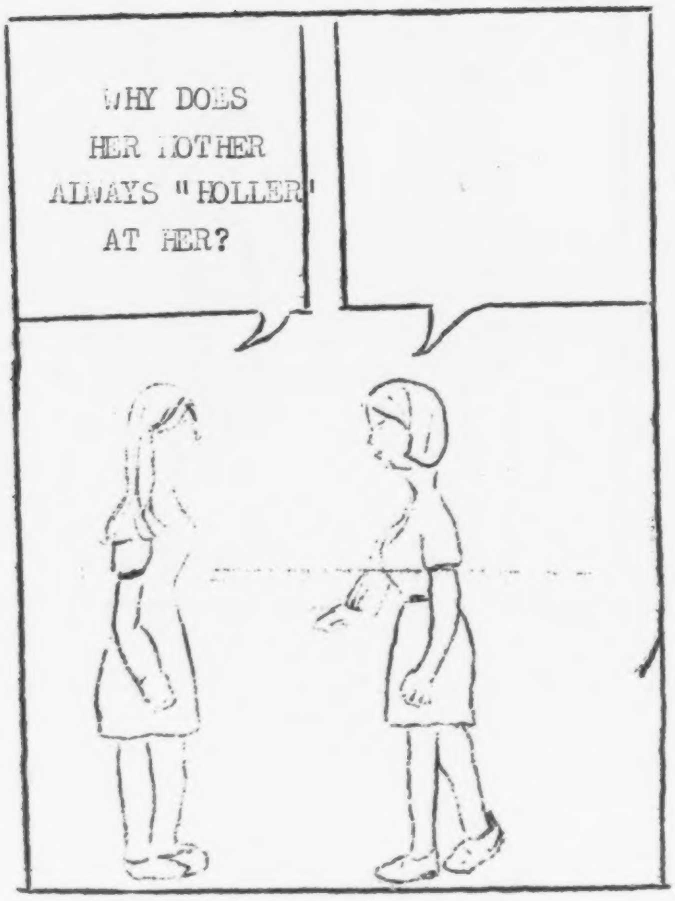
3.


WHENEVER YOU'RE INVOLVED SOMETHING GOES WRONG!

4.


THAT'S THE THIRD GAME WE'VE LOST THIS YEAR !

5


WHY DOES HER MOTHER ALWAYS "HOLLER" AT HER?

6.

STUDENT EVALUATION

LINCOLN HIGH SCHOOL
SAINT LOUIS, MISSOU RI

Student's Name ________________ Advisor ____________________ Date __________

Counselor ________________ Teacher Making Report ______________________

INSTRUCTIONS: Please Place A Check Mark (✓) In The Box Above the Description Which You Feel Most Closely Describes The Student.

RESPONSIBILITY - DEPENDIBILITY - RELIABILITY

☐ Careless, neglects promises and obligations. Needs constant supervision. No chance to observe the foregoing ☐	☐ Reliable on most occasions. Has to be prompted some.	☐ Reliable and punctual; makes up time lost by absence. Willing to assume obligations.	☐ Stimulated by responsibility and carries it well, even under difficulty. Always on time.	

Attention

☐ Highly distractible. Constantly shifting attention. No chance to observe the foregoing ☐	☐ Finds it very hard to complete any job.	☐ Gives normal attention to specific things.	☐ Becomes extremely absorbed in his work.	☐ Can focus on task indefinitely.

COMPLIANCE ☐ Openly hostile to authority. No chance to observe the foregoing ☐	☐ Inclined to be critical of authority.	☐ Usually accepts authority.	☐ Shows respect for opinions of authority.	☐ Never questions. Revcals utter acceptance of all authority.
COOPERATION ☐ Extremely uncooperative. Obstinate. Utterly unable to work in a group. No chance to observe the foregoing ☐	☐ Antagonizes others. Opposed to group activities. Tries to get the easiest job.	☐ Usually agreeable. Generally willing to help and carry own share of work.	☐ Happy in teamwork. Always agreeable.	☐ Eager to do more than required. Always carries own share of load. Works well with others.
INTEREST ☐ Extreme lack on industry. Negligent. Completes little or no work. No chance to observe the foregoing ☐	☐ Lazy. Completes some required work.	☐ Gets required work done, but no more.	☐ Steady worker. Occasionally does more than required.	☐ Extremely industrious. Eager. Constantly engaged in any activity undertaken. Usually does more than required.
PARTICIPATION ☐ Rarely or never talks. "A loner". No chance to observe the foregoing ☐	☐ Considered rather quiet.	☐ Carries his share of class discussion.	☐ Participates more than most	☐ Always wants to participate.

LEADERSHIP

☐ Always a follower. Never takes initiative, shuns responsibility. No chance to observe the foregoing ☐	☐ Tends to follow. Prefers plans of others.	☐ Will take responsibility if asked. Leads in minor activities.	☐ Often shows initiative. Arouses enthusiasm. Tends to be a leader.	☐ Good judgment. Accepted by others as a genuine leader.

QUALITY OF COMPREHENSION

☐ Highly illogical. No chance to observe the foregoing ☐	☐ Frequently makes errors in thinking.	☐ Fairly careful reasoner.	☐ Logical	☐ Exceptional reasoning ability.

RATE OF COMPREHENSION

☐ Usually slow in his thinking. No chance to observe the foregoing ☐	☐ Plods along.	☐ Average speed in thinking.	☐ Quick.	☐ Usually fast thinking .

AGGRESSIVENESS

☐ Never stands up for self- "a door mat." No chance to observe the foregoing ☐	☐ Usually gives in.	☐ Backs up opinion. Can yield when necessary.	☐ Quite domineering.	☐ Hard headed. Pugnacious in making his point.

DEFENSIVENESS (Negative Criticism As Behavioral Trait)

☐ Consistently unduly critical. No chance to observe the foregoing ☐	☐ Ocasionally unduly critical.	☐ Will sometimes comment negatively on faults of others.	☐ Never heard to criticize negatively.

PREOCCUPATION

☐ Loaded with anxiety. Life an unending worry. No chance to observe the foregoing ☐	☐ Worries often. Too frequently expects the worst.	☐ Worries only when he should.	☐ Not one who is apt to worry.	☐ No worries ever. Completely carefree.

SELF-COMMUNICATION

☐ Complete refusal to discuss self. No chance to observe the foregoing ☐	☐ Information about self must be dug for.	☐ Helpful and fairly free in discussing self.	☐ Readily gives information about self.	☐ No reserves. Enjoys talking about self.

EMOTIONAL STABILITY

☐ Very emotional. ☐ Apathetic. No chance to observe the foregoing ☐	☐ Excitable ☐ Unresponsive	☐ Usually well balanced.	☐ Well balanced.	☐ Very Stable.

POLITENESS ☐ Grossly discourteous and inconsiderate. No Chance to observe the foregoing ☐	☐ Occasionally discourteous and inconsiderate.	☐ Aware of basic social convertions. Usually observes them.	☐ Courteous	☐ Always polite. Exceptionally courteous.
SOCIAL CONCERN ☐ Anti-social behavior. No chance to observe the foregoing ☐	☐ Indifferent, no feelings for others.	☐ Occasionally shows concern for others.	☐ Friendly person.	☐ Shows marked feelings of empathy.
SOCIAL ACCEPTANCE ☐ Rejected by all. No chance to observe the foregoing ☐	☐ Rejected by most.	☐ Varies with conditions.	☐ Liked by most.	☐ Well liked by all.
PERSONAL APPEARANCE ☐ Poorly groomed. No chance to observe the foregoing ☐	☐ Well groomed but inappropriately dressed.	☐ Reasonably well groomed and appropriately dressed.	☐ Well groomed and appropriately dressed.	☐ Immaculate.

Parent Reaction Questionnaire

1. Instructions to Parent

We know that parents react to their children's abilities, interests and performances in many different ways. The type of activity in which the child is engaged makes a difference in how parents react. For example, the way a parent responds when the child tries to build something mechanical often is quite different from this parent's response to his child's reading skill. Sometimes the way parents react to their children is different from the way they feel they should react. At present we are interested in finding out more about how parents really do react toward their children rather than what parents feel they should do.

The purpose of this questionnaire is to learn more about your reactions to your child's activities in the intellectual area, which would include such activities as reading, spelling, arithmetic, learning, studying and remembering.

To make it convenient for you, we have described a number of everyday situations involving a parent and child. For each of these situations we have listed a number of ways a parent might react. For example:

When X became tired from playing sports outside

2 a. I did not interfere.
b. I made him take a nap.
1 c. I encouraged him to do something else.
d. I became annoyed with him.
x e. I told him he needs more practice.

Read the description of the situation. Then from the statements which follow it, select the one which best describes the way you have reacted to your child in similar situations. Place a 1 in front of that statement. Next, select the statement which describes your second most usual reaction and place a 2 in front of it. If any of the additional statements describes ways in which you have responded to your child in similar situations, place an x in front of it. The way that the above example is marked indicates that the parent usually reacts in the manner described by sentence c.; that the next most usual reaction of the parent in that type of situation is described in sentence a.; and that the parent also responds in the manner described in sentence e. at times.

If your child has never been in the type of situation described, place an (X) in front of the number of that situation, omit it and continue with the next one. Remember, be sure to indicate what you really do and not what you think you ought to do.

2. Intellectual Area

____1. When X showed improvement or did well in a school subject

____a. I gave him (her) a hug or kiss or expressed my affection for him (her)
____b. I told him (her) he (she) did very well in that subject.
____c. I told him (her) I would like him (her) to work harder in his (her) other subjects too.
____d. I said very little about it.
____e. I told him (her) that he (she) is showing good scholastic ability.
____f. I told him (her) that he (she) could still do better.

____2. When X began to tell me about something he (she) had learned in school.

____a. I listened but didn't say much.
____b. I talked with him (her) and showed interest in what he (she) was saying.
____c. I told him (her) that I was pleased that he (she) understood the material.
____d. I told him (her) that he (she) seemed to know the material well.
____e. I explained the things discussed in school that he (she) didn't completely understand.
____f. I told him (her) that he (she) needs to pay closer attention to the teacher's explanations.

____3. When X brought home a low grade from school

____a. I asked him (her) why he (she) got the low grade.
____b. I told him (her) that I was annoyed.
____c. I didn't say anything about it.
____d. I told him (her) that his (her) other grades were good.
____e. I told him (her) that he (she) needs to improve.
____f. I told him (her) the grade wasn't too bad and that he (she) probably would do better the next time.

____4. When X didn't completely understand something I was explaining or teaching him (her)

____a. I got impatient and spoke a little sharply.
____b. I let the matter drop.
____c. I corrected him (her) and explained it in a simpler fashion.
____d. I told him (her) to listen more carefully.
____e. I told him (her) that he (she) seemed to understand most of it clearly.
____f. I told him (her) it didn't matter, and that I would explain it later, and that I'm sure he (she) would understand.

____5. When X was-doing school work at home

____a. I told him (her) I am very pleased with his (her) progress.
____b. I showed him (her) some of his (her) mistakes.
____c. I told him (her) to try to work harder at it than he (she) did before.
____d. I was too busy to pay much attention to what he (she) was doing.
____e. I told him (her) I am glad he (she) is interested in his (her) school work.

____6. When X read something out loud

____a. I suggested that he (she) practice more.
____b. I didn't say anything.
____c. I told him (her) that he (she) is doing very well.
____d. I listened and talked with him (her) about the material he (she) had read.
____e. I corrected his (her) errors and showed him (her) how to improve.

____7. When X was a little careless with his (her) school work.

____a. I didn't say anything.
____b. I told him (her) I was disappointed in him (her).
____c. I picked out those things he (she) did carefully and told him (her) that he (she) did a good job on those.
____d. I told him (her) that his (her) work was poorer than usual.
____e. I suggested that he (she) work harder on it.
____f. I showed an interest in what he (she) was doing and asked him (her) to tell me about it.

____8. When X recited or showed that he (she) remembered most of the information that he (she) had been taught some time ago (such as a story, poem, or some general information)

____a. I told him (her) he (she) should try to learn the rest of it.
____b. I commented on how good his (her) memory is.
____c. I told him (her) he (she) did fine.
____d. I didn't say anything about it.
____e. I told him (her) I was very pleased and expressed affection to him (her).
____f. I told him (her) I was sorry he (she) couldn't remember the rest of it.

____9. When X finished his (her) school work very quickly

____a. I told him (her) I'm pleased that he (she) can do the work so fast.
____b. I told him (her) that I'm happy he (she) catches on to things so quickly.
____c. I didn't comment on that.
____d. I told him (her) he (she) should spend more time on his (her) work.
____e. I told him (her) that's fine.
____f. I told him (her) that he (she) prabably would forget the material because he (she) did it so fast.

____10. When X wanted his (her) homework checked

____a. I told him (her) that he (she) had done a good job and that I would show it to his (her) father (mother).
____b. I found his (her) mistakes for him (her) and made him (her) correct them.
____c. I told him (her) I thought he (she) should be able to do better.
____d. I praised him (her) for the things he (she) had done correctly.
____e. Since I was busy, I told him (her) to ask his (her) father (mother) to check it.

____11. When X asked me to explain some information to him (her) or give him (her) the meaning of a word.

____a. I suggested he (she) ask his (her) father (mother).
____b. I first asked him (her) what he (she) thought and then corrected him (her).
____c. I told him (her) that he (she) needs to learn how to find out such things for himself (herself).
____d. I told him (her) that he (she) catches on to things very quickly.
____e. I told him (her) I was glad he (she) was interested in learning new things.

____12. When X said something that indicated childish reasoning

____a. I told him (her) that he (she) was wrong and was being childish.
____b. I corrected him (her).
____c. I told him (her) to think about the matter more carefully.
____d. I didn't say anything.
____e. I told him (her) that I was glad he (she) was interested in the subject.
____f. I told him (her) he (she) was clever and imaginative to be able to make up something like that.

P = Positive
N = Negative
Neut = Neutral

Scoring System for the
Parent Reaction Questionnaire

Scoring System for Parent Reaction Questionnaire -- Appendix C

We have used both a weighted and an unweighted scoring method and get very similar prediction from the two. However, you may wish to try both. The following are the directions for the total PRQ instrument. You can adapt them as necessary.

Subscores are obtained for each of the four areas: intellectual, physical skills, artistic and mechanical. One of these may be used separately to predict a dependent variable in a particular area, or they may be summed to get a general parent reaction measure. For either the weighted or unweighted method we disregarded responses which the parent merely checked and used only those for which he gave a 1 or 2 rank.

Unweighted method (for each area):

Positive reactivity. Count the number of times a parent gave either a 1 or 2 rank to a positive response (see key). Divide this sum by 2 times the number of items out of the 12 that the parent answered (because this is the total number of positive responses he could have given, considering those situations in which his child has had experience). For example, if parent answers 10 of the 12 items, divide the number of positive responses he gave by 20.

Negative reactivity. Repeat above for negative responses.

Total reactivity for each area. This is sort of general parental responsiveness, disregarding praising or critical direction of the responses. Sum positive and negative reactivity. As is apparent, this will account for all overt responses, but leave out neutral non-responses.

Weignted method:

Do as above except weight a rand of "1" given by parent as 2, and a rank of "2" given by parent as 1. Divide sum of weighted positive responses by 3 times the number out of the 12 items that the parent answered. (Again, if the parent happened to answer 10 of 12 items, the divisor would be 30.) Divide the negative weighted sum by the same denominator.

Parent Reaction Questionnaire

1. Instructions to Parent

From last year's interviews with parents, we learned that parents react to their children's abilities, interests and performances in many different ways. We also found that the type of activity in which the child is engaged makes a difference in how parents react. For example, the way a parent responds when the child tries to build something mechanical often is quite different from this parent's response to his child's reading skill. Sometimes the way parents react to their children is different from the way they feel they should react. At present we are interested in finding out more about how parents really do react toward their children rather than what parents feel they should do.

The purpose of this questionnaire is to learn more about your reactions to your child's activities in the four general areas whech we discussed previously. These areas are: (a) intellectual activities (reading, spelling, arithmetic, learning, remembering, etc.); (b) physical skills (sports, running, climbing, bicycleriding, etc.); (c) artistic activities (drawing, painting, clay modeling, music, dramatics, etc.); and (d) mechanical activities (wood-work, metal work, using tools, sewing, weaving, etc.).

To make it convenient for you, we have described a number of everyday situations involving a parent and child. For each of these situations we have listed a number of ways a parent might react. For example:

When X became tired from playing sports outside

_2_ a. I did not interfere.
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___ d. I became annoyed with him.
_x_ e. I told him he needs more practice.

Read the description of the situation. Then from the statements which follow it, select the one which best describes the way you have reacted to your child in similar situations. Place a 1 in front of that statement. Next, select the statement which describes your second most usual reaction and place a 2 in front of it. If any of the additional statements describes ways in which you have responded to your child in similar situations, place an x in front of it. The way that the above example is marked indicates that the parent usually reacts in the manner described by sentence c.; that the next most usual reaction of the parent in that type of situation is described in sentence a.; and that the parent also responds in the manner described in sentence e. at times.

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P f. I told him (her) that he (she) is showing good scholastic ability.

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P c. I told him (her) he (she) did fine.
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P a. I told him (her) I'm pleased that he (she) can do the work so fast.
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N d. I told him (her) he (she) should spend more time on his (her) work.
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P e. I told him (her) that I was glad he (she) was interested in the subject.
P f. I told him (her) he (she) was clever and imaginative to be able to make up something like that.

Mothers' Attitudes Toward The Achievement Behaviors Of Their Children

(Fels Research Institute Evaluation Form)

INTELLECTUAL AREA: COMPETENCE

We would like you to evaluate your child's competence in academic and intellectual tasks in comparison with other children his age (including such things as reasoning, learning ability, memory, reading, spelling, arithmetic, and other formal school subjects.) On this sheet there are eight different phrases describing levels of competence. Let's read them carefully. To the left of these statements is a line. Put an X on the line at the point that best represents your judgment of your child's intellectual competence.

_______ Does exceptionally better than others his age.

_______ Is much more competent than others his age.

_______ Is moderately more competent than others his age.

_______ Does slightly better than others his age.

_______ Does slightly worse than others his age.

_______ Is moderately less competent than others his age.

_______ Is much less competent than others his age.

_______ Does extremely worse than others his age.

INTELLECTUAL AREA: MINIMAL STANDARDS

Now we would like you to indicate your minimal standards for your child's performance in school work and other intellectual activities. The phrases below indicate levels of competence of performance. Make an X on the scale at the point which best represents the level of competence where you would begin to feel dissatisfied with your child's performance. In other words, how poorly would your child have to do before you would begin to feel dissatisfied?

______ Does exceptionally better than others his age.

______ Is much more competent than others his age.

______ Is moderately more competent than others his age.

______ Does slightly better than others his age.

______ Does slightly worse than others his age.

______ Is moderately less competent than others his age.

______ Is much less competent than others his age.

______ Does extremely worse than others his age.

INTELLECTUAL AREA: SATISFACTION-DISSATISFACTION

Next we would like you to indicate how satisfied or dissatisfied you are with your child's performance in school subjects and other intellectual activities.

_____ I am completely satisfied with his performance.

_____ I am highly satisfied with his performance.

_____ I am moderately satisfied with his performance.

_____ I am slightly satisfied with his performance.

_____ I am slightly dissatisfied with his performance.

_____ I am moderately dissatisfied with his performance.

_____ I am highly dissatisfied with his performance.

_____ I am completely dissatisfied with his performance.

INTELLECTUAL AREA: IMPORTANCE

This time we would like to know how important you feel it is for your child to do well in academic and intellectual subjects and activities.

______ It is extremely important to me that he do well.

______ It is very important to me that he do well.

______ It is somewhat important to me that he do well.

______ It is slightly important to me that he do well.

______ It is relatively unimportant to me that he do well.

______ It is completely unimportant to me that he do well.

GRAPHIC STUDENT EVALUATION SUMMARY

Name ______________________________ ________________1st - Red
No. of Teachers Reporting ______ ________________2nd - Blue
________________3rd - Green

* - Items Used for Teacher's Composite Positive Evaluation

	No Comm.	Low	Below Av.	Average	Above	Very High
*Responsibility						
*Attention						
Compliance						
*Cooperation						
*Interest						
*Participation						
*Leadership						
Quality of Comp.						
Rate of Comp.						
*Aggressiveness						
*Defensiveness						
Preoccupation						
*Self-Communication						
*Emotional Stability						
Politeness						
Social Concern						
Social Acceptance						

GRAPHIC STUDENT EVALUATION SUMMARY

Name ______________________________ ______________1st - Red

No. of Teachers Reporting ________ ______________2nd - Blue

______________3rd - Green

* - Items Used for Deviant Behavior Score

	No Comm.	Low	Below Av.	Average	Above Av.	Very High
*Responsibility						
*Attention						
Compliance						
*Cooperation						
*Interest						
*Participation						
*Leadership						
Quality of Comp.						
Rate of Comp.						
*Aggressiveness						
*Defensiveness						
Preoccupation						
*Self-Communication						
*Emotional Stability						
Politeness						
Social Concern						
Social Acceptance						

Interview I

PARENT INTERVIEW REGARDING CHILD'S ACHIEVEMENT BEHAVIOR

In this interview there are many things we want to find out about X, his interests, abilities, activities, etc. We're also very interested in your feelings about these and some of the specific incidents that have occurred which make you feel as you do. Wherever you can think of a specific incident that pertains to the question or illustrates your feeling, be sure to bring it up. In answering questions about their children, it's natural for parents to think in terms of other children as well. We would like you to try to think in terms of X only and tell us your feelings about him (her), unless of course you are making a comparison of X with other children. We also would like you to try to separate your feelings, attitudes and actions with respect to X from those of your wife (husband) since we will obtain her (his) impression separately.

We have divided the questions into separate groups based on particular types of activities; for example, sometimes we'll be talking about sports and physical activities, sometimes school work and sometimes mechanical and manual activities. Before starting the questions in each area, I will give you a brief description of the types of activities and skills which we wish to cover. At first the questions will be very specific and I will ask you to rate your impressions of the feelings about X on scales I will give you. Afterwards we will discuss your rating in detail, and at that time, I hope you will bring up any of your feelings, or incidents that have occurred which you think are relevant.

I. Intellectual Area

Let's begin by talking about X's academic and intellectual performance. We want to cover both the things he does in school and those he does at home which involve his intellectual and academic abilities. We will talk about such things as his ability to reason, to learn and to remember. We also will be talking about his general schoolwork.

Rating Scales . . . . .

Let's go back now and discuss the choices you made . . . . .

1. E (obtain description of child's performance on which parent bases E)
2. Satisfaction-dissatisfaction
3. Minimal standards
4. General standards
5. A. V. (obtain reasons why the child's participation is important to the parent)

Intellectual: Specific Questions

1. What grade is X in this year?

2. How often do you and X discuss his school work (both as far as content of his subjects and his progress is concerned)?
   a. What things do you usually ask him about?
   b. How much have you discussed his attitude toward school with him?

3. What were X's grades on his last report card? (Elaborate strong and weak areas.)
   a. How did you feel about them in general?
   b. What did you say to X about his grades?

4. How well do his grades fit with your idea of his abilities? (Elaborate)
   a. Have you discussed this with X? Describe.

5. Ideally, what kind of grades would you like X to get at the present time? Why?

6. In general, how low would X's grades have to get before you'd be dissatisfied?

7. Can you describe a time when you were particularly pleased with X for his school work? What did you do?

8. When have you been displeased with some aspect of X's school work? What did you do then?

9. Parents use different ways of indicating their satisfaction with their children's progress in school. In what ways do you show your satisfaction with X in this respect?

10. Parents also use different ways if indicating their dissatisfaction with their children's school work. In what ways have you expressed your dissatisfaction with X concerning his school work?

11. How far would you like to see him get in his education?
    a. What in particular would you like him to get out of his future education?

12. Children often do spend time at home on intellectual activities such as reading books, practicing spelling, doing arithmetic or other problems, etc.
    a. Do you encourage X to spend more or perhaps less of his time on such things? How do you do this?
    b. How often do you and X work on such things together? Can you describe such an incident?
    c. How much effort does he put into any work he does at home along these lines? What have you said to him about this?

13. How do you usually react when X is particularly curious and interested about some subject (such as nature, geography, history, etc.) and wants to learn more about it?

14. How do you feel about parents providing experiences and materials for their children to add to what they learn at school? Why?
    a. What have you done in the home to stimulate and encourage X's interest in intellectual activities?
    b. What in particular did you want him to get out of this?